

**CECYT 13**

**“Ricardo Flores Magón”**

**Cuaderno de Trabajo**

**Unidad de Aprendizaje**

**Algebra**

**Elaborado por el Profesor**

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2010

COMPETENCIA PARTICULAR

Emplea las operaciones aritméticas y sus propiedades,en los diferentes conjuntos de números, para la solución de problemas relacionados con su entorno académico, personal y social.

**RAP**

* 1. Relaciona los diferentes conjuntos de números que dan origen a los números reales y su implicación con la evolución humana.
  2. Relaciona operaciones fundamentales con números reales que se relacionan con situaciones de su entorno.
  3. Emplea los algoritmos y de las operaciones aritméticas en solución de problemas de su ámbito personal, social y global.

Evidencia 1

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números reales RAP: 1.1**

Instrucciones: Investiga la definición de números reales, de números naturales, enteros, racionales e irracionales. Y elabora en un mapa de Veen como están relacionados cada uno de estos números.

Evidencia 2

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo:\_\_\_\_\_ Fecha:\_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Instrucciones: Investiga las propiedades de los números enteros, racionales e irracionales.

|  |  |
| --- | --- |
| Propiedades de los logaritmos y potencias. | |
| De los logaritmos  Prop. I.  Prop. II.  Prop. III.  Prop. IV.  Prop. V. | De los exponentes |

Evidencia 3

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Realiza las siguientes operaciones.

a) - 3 + 2 = f) 18 + 36 = k) 17 + 35 =

b) 4 - 5 = g) 17 - 36 = l) -17 - 35 =

c) 9 - 18 = h) -18 - 47 = m) -17 + 35 =

d) 4 - 16 = i) -14 -13 = n) 35 -17 =

e) \_ - 12 = 65 j) -17 + \_ = 73 o) \_ + 49 = - 47

**Evidencia 4**

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Realiza las siguientes operaciones.

a) 3 – 2 – 1 – 6 – 5 + 4 + 8 + 9 +7 + 4 – 6 =

b) – 65 + 4 – 9 + 86 – 54 – 6 + 5 – 45 =

c) 9 – 8 + 7 – 9 + 7 – 9 + 4 – 5 + 6 – 1 =

d) 21 + \_ +46 + 48 + 97 – 23 + 15 = – 253

e) 45 +76 – 58 + \_ – 988 – 79 = 400

f) 591 – 7 + 6 – 8 + 1 – 2 + 3 – 1 + 6 – 8 =

g) 64 – 9 + 8 – 4 + 8 + 9 + 4 – 9 + 8 – 2 =

h) 6 – 5 + 4 – 7 + 8 – 9 + 4 – 6 + 5 – 6 =

i) 47 + \_ – 93 + 24 – 34 + 56 – \_ = 375

j)80 + 98 – \_ + 86 – 54 + 76 – 54 = – 100

**Evidencia 5**

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

**Resuelve los siguientes ejercicios.**

1. – 5 (– 4) = 11. 10 (– 6) = 21. 8 (– 6) =

2. 8 (– 6) = 12. 5 (– 5) = 22. 7 (– 5) =

3. (– 5)3 = 13. (– 10)3 = 23. 5 x 8 =

4. – (– 10)7 = 14. 6 x 2 = 24. 6 (– 4) =

5. 7 x 8 = 15. 9 x 8 = 25. 8 (– 4) =

6. – 4 (– 6) = 16. 3 x 7 = 26. 6 x 7 =

7. 4 (– 5) = 17. 3 x 10 = 27. 9 (– 6) =

8. 8 (– 4) = 18. 2(– 4) = 28. (– 10)11 =

9. 2 x 8 = 19. 8 x 3 = 29. 8 x 9 =

10. 9 x 7 = 20. 7 (– 6) = 30. 7 x 9 =

Evidencia 6

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

**Resuelve las siguientes operaciones.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | 2 | = |  | 15. | 66 | = |  | 28. | 56 | = |
| 1 |  | 3 |  | 7 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. | -8 | = |  | 16. | 40 | = |  | 29. | 0 | = |
| -4 |  | 2 |  | 15 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3. | 9 | = |  | 17. | 10 | = |  | 30. | 18 | = |
| 3 |  | 10 |  | 9 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4. | -20 | = |  | 18. | 30 | = |  | 31. | 60 | = |
| 10 |  | 2 |  | (-5) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5. | 12 | = |  | 19. | 9 | = |  | 32. | 20 | = |
| 1 |  | 6 |  | (-5) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6. | -20 | = |  | 20. | 18 | = |  | 33. | 0 | = |
| -5 |  | 9 |  | (-1) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7. | 70 | = |  | 21. | 64 | = |  | 34. | 12 | = |
| 2 |  | 8 |  | 0 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8. | -15 | = |  | 22. | 15 | = |  | 35. | -22 | = |
| -5 |  | 5 |  | 1 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9. | 90 | = |  | 23. | 72 | = |  | 36. | -40 | = |
| 3 |  | 8 |  | (-5) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10. | -16 | = |  | 24. | 64 | = |  | 37. | 14 | = |
| -4 |  | 8 |  | 7 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11. | -45 | = |  | 25. | 8 | = |  | 38. | -52 | = |
| 9 |  | (-4) |  | (-4) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12. | 10 | = |  | 26. | 70 | = |  | 39. | 60 | = |
| 2 |  | 70 |  | (-4) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13. | -81 | = |  | 27. | 64 | = |  | 40. | 8 | = |
| 9 |  | (-4) |  | 2 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14. | 20 | = |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |

Evidencia 7

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

**Resuelve las siguientes operaciones.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | -180 | = |  | 15. | 35 | = |  | 28. | 46 | = |
| 18 |  | (-5) |  | 0 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. | 200 | = |  | 16. | -49 | = |  | 29. | 180 | = |
| (-4) |  | 7 |  | 0 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3. | 2 | = |  | 17. | -36 | = |  | 30. | -124 | = |
| 2 |  | 2 |  | (-4) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4. | 20 | = |  | 18. | 9 | = |  | 31. | -900 | = |
| 10 |  | 3 |  | 90 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5. | 1000 | = |  | 19. | -90 | = |  | 32. | -0 | = |
| 1 |  | 3 |  | 45 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6. | -500 | = |  | 20. | 12 | = |  | 33. | -15 | = |
| 2 |  | (-4) |  | 0 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7. | -18 | = |  | 21. | 14 | = |  | 34. | 36 | = |
| 6 |  | 2 |  | 2 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8. | 80 | = |  | 22. | 44 | = |  | 35. | 12 | = |
| 20 |  | 2 |  | 2 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9. | -70 | = |  | 23. | 30 | = |  | 36. | -75 | = |
| 10 |  | 15 |  | (-5) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10. | -15 | = |  | 24. | 90 | = |  | 37. | 50 | = |
| 3 |  | (-5) |  | 50 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11. | -16 | = |  | 25. | 12 | = |  | 38. | -10 | = |
| 2 |  | 12 |  | (-5) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12. | -80 | = |  | 26. | 48 | = |  | 39. | 22 | = |
| 4 |  | (-4) |  | 2 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13. | 36 | = |  | 27. | 48 | = |  | 40. | -4 | = |
| 2 |  | 3 |  | (-4) |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14. | -48 | = |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |

Evidencia 8

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Instrucciones: Aplica la jerarquía de operaciones para resolver los siguientes ejercicios.

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8. 

9. 

10. 

Evidencia 9

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Instrucciones: Aplica la jerarquía de operaciones para resolver los siguientes ejercicios.

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8. 

9. 

10. 

Evidencia 10

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Instrucciones : Racionaliza y simplifica los siguientes radicales.

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8. 

9. 

10. 

Evidencia 11

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Instrucciones : Racionaliza y simplifica los siguientes radicales.

1.- 

2.- 

3.- 

4.- 

5.- 

6.- 

7.- 

8.- 

9.- 

10.- 

Evidencia 12

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Instrucciones: Aplica la jerarquía de operaciones para resolver los siguientes ejercicios.

1.- 

2.- 

3.- 

4.- 

5.- 

6.- 

7.- 

8.- 

9.- 

10.- 

Evidencia 13

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Números Reales RAP: 1.2 y 1.3**

Instrucciones : Racionaliza y simplifica los siguientes radicales.

1.-  6.-  11.- 

2.-  7.-  12.- 

3.-  8.-  13.- 

4.-  9.-  14.- 

5.-  10.-  15.- 

COMPETENCIA PARTICULAR

Utiliza conceptos, propiedades y relaciones algebraicas en la solución de ejercicios de su entorno académico.

**RAP**

* 1. Reconoce expresiones algebraicas, sus elementos y propiedades en operaciones con polinomios en su ámbito académico.
  2. Identifica productos notables y la factorización de expresiones algebraicas en un ámbito matemático.
  3. Utiliza los productos notables y la factorización en operaciones con fracciones algebraicas en su ámbito académico.

Evidencia 1

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

Evalué las expresiones siguientes, dado que **a=2, b=-3, c=1 y d=-2:**

|  |  |  |
| --- | --- | --- |
| 1. a - 4 | 1. b - 2 | 1. 6 – b |
| 1. - 5 - d | 1. a + b | 1. a - b |
| 1. b – d | 1. 2a + b | 1. 3a + d |
| 1. 2a – 3c | 1. 4a - d | 1. 2c – b |
| 1. 2b + 3d | 1. 2b – 3d | 1. 3a – b – 6 |
| 1. 2b + 4d – 7 | 1. a – 2b + c | 1. a + 2b – 3c |
| 1. a – b – 2d | 1. d + 3c – 4b | 1. 6a – 5b – d |
| 1. 4c + 3b – 8a | 1. b + d – 5c | 1. 3b – 8c + 2d |
| 1. b – 3a – 2d + 10 | 1. 3d – 4c - 2b + 6 | 1. a – b + 2c + 3d |
| 1. a + 2b – c + 6d | 1. 4a – b – 3c + d | 1. a – 4b + 3c – 7d |
| 1. a – (b + c) | 1. 2a + (c + d) | 1. b – (c – 2d) |
| 1. c – (2a - d) | 1. b – 2(3c – d) | 1. a + 3(b – 2d) |
| 1. 2c – 2(3a – 2b) | 1. 2d + 5(7c – 3d) | 1. ab + d |
| 1. bc - a | 1. ad - c | 1. bd – 3c |
| 1. ab – 3cd | 1. 2ac + 5bd | 1. 5bc – 8ad |
| 1. 6cd – 3bda | 1. 2a + b(2a – d) | 1. 3b – b(3 – d) |
| 1. 3a + a(b –d) | 1. 3c + b(2a + d) |  |

Evidencia 2

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

Reduzca términos semejantes en cada una de las expresiones siguientes:

|  |  |  |
| --- | --- | --- |
| 1. 2a +5 - 4 | 1. 3x – 7x + x | 1. 8 – 12y – 3y |
| 1. 1 – 5b + 4b | 1. 2ab – b + 6ab | 1. 10xy + y – 7xy – 8y |
| 1. 4ax – 10bx – 9bx – 4ax | 1. 3xy – zy + 5xy – 2yz |  |

Evidencia 3

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

Elimine parentesisi y reduzca términos semejantes en cada una de las expresiones siguientes:

1.- 

2.- 

3.- 

4.- 

5.- 

6.- 

7.- 

8.- 

9.- 

10.- 

Evidencia 4

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

Obtenga la suma de los siguientes polinomios.

|  |  |
| --- | --- |
| 1. 2a + 6b, 7a – 2b | 1. 4x – 3y, 2x – 6y |
| 1. x – 3y, 2y – 5x | 1. 7a + b, – 3a – 4b |
| 1. x + y – 3, 2x – y – 5 | 1. 3x + 2y – 4, 6y – 4x + 1 |
| 1. 2x - 3y + 4, 2y – x – 2 | 1. x + y – 7, 3y – 4x – 1 |
| 1. 3x – 8, 7 – 4x, 2x – 1 | |
| 1. 5x + 6, -3x + 2, x – 9 | |
| 1. 2x – 3y, – 4x + 7y, –x – 2y | |
| 1. x – 3y, 6x – 3y, –x + 2y | |
| 1. 3x – 2y + 1, 2x + 5y – 6, 3 – x – 3y | |
| 1. 4x – 3y + 13, 7x + 8y – 6, 2y – 5 – 8x | |
| 1. 5x – 3y + 1, 2x – x – 7, 12 + 6y – 15x | |
| 1. 2x – 3y + z, 2y – x, 3y – 2z – 3x | |
| 1. a + 10b – 9, 3a – 5b + 4c, 2c + b – 6 | |
| 1. 5ab – 2a + b, ab + 2a – 3, 5a – ab | |
| 1. 10b + 5bc – 6c, 7bc – 4b + c, 9c – 8bc | |
| 1. 8xy – 2yz, 2xy – z + 6yz, 9yz – 7yx – 3z | |

Evidencia 5

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

En cada uno de los ejercicios siguientes sustraer:

|  |  |  |
| --- | --- | --- |
| 1. 5a de 7a | 1. 2a de 3a | 1. 9a de a |
| 1. 6a de 2a | 1. – 6a de 3a | 1. – 2a de 5a |
| 1. a de – 4a | 1. 7a de – 10a | 1. – 3a de – 2a |
| 1. – 2a de – 9a | 1. 2 de 2a | 1. a de ab |

Evidencia 6

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

En cada uno de los siguientes ejercicios sustraiga el primer polinomio del segundo

|  |  |
| --- | --- |
| 1. 3x – 1, x – 10 | 1. 1 – 4x, 10 – x |
| 1. 2x – 1, x + 3 | 1. 7 + x, 7x – 5 |
| 1. 2x – y – 8 , 2x – 3y – 6 | 1. 3x + y – 9, 2x + y – 5 |
| 1. 4x – 3y + 12, 6x – 2y + 9 | 1. y – 2x + 3, 3x – 5y – 15 |
| 1. 2a + 3b + 6c, 3a – 2b + c | 1. 2a + 5b – 6c, 7a + 3b – 6c |
| 1. 6a – 10b + 8c, 5a + 7b – c | 1. – ab + 4bc – 2, 3ab – 2bc +1 |

Evidencia 7

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

Elimine los símbolos de agrupación y reduzca términos semejantes:

|  |  |  |  |
| --- | --- | --- | --- |
| 1. 3a + (2 + 5a) | 1. a + (2a + 3) | | 1. 2a + (8 – a) |
| 1. 3a + (4 – 2a) | 1. 7a – (a + 7) | | 1. 2a – (a + 6) |
| 1. x – (2x – 4) | 1. 3x + (x – 3) | | 1. 5x – (1 – 3x) |
| 1. 2x – (2 – x) | 1. 4 + 6(x – 1) | | 1. 5 + 5(2x – 3) |
| 1. 7 – 2(3x – 8) | 1. 6 – 3(2x – 1) | | 1. 13 – 3(5x – 1) |
| 1. 17 – 7(3x – 8) | | 1. (2x – 3y) – 4(x – 5y) | |
| 1. 2(5x – 4y) – (7x + y) | | 1. 3(2a – b) – 4(a + b) | |
| 1. 5(b – 4a) – 6(b + 3a) | | 1. (a – 3b) – 3(a – 2b) | |
| 1. 8(2a – b) – 4(b – a) | | 1. 3a – (2a + 3a) + (b + a) | |
| 1. 9 – 2(a + 3) +(a + 2) | | 1. 13 + 2(a + 5) – (7 + a) | |
| 1. x – 3(2x + 3) +(x + 1) | | 1. 12x – (12 – 5x) + 2(3x – 4) | |
| 1. 7 – 4(2x – 5) + 3(x – 8) | | 1. 3x + 2 – (x – 3) | |
| 1. 5x + 6 – (2x – 1) | | 1. 2x + y – (x – y) | |
| 1. 9y + 3x – (y + 4y) | | 1. 10 – 8 – 2(x + 5) | |
| 1. a – 7 – 3(4 – a) | | 1. x – 7 – 3(2x – 4) | |
| 1. 3x – 6 – 2(2 – 3x) | | 1. 4x – 9 – 4(3 – x) | |
| 1. 4x + x – (2x – 3) – 5 – 2(1 – x) | | 1. x – 3x + (4 – x) – 8 – 3(x – 2) | |
| 1. 3x – y – (x – 2y) – 2x – (y – 2x) | | 1. 3y – x – 2(3x – y) – 2y – (x + 3y) | |
| 1. 2x – y + (1 – x) – 1 – (y – 3x) | | 1. 7 – 2 x + (2x – 1) – 5 – 2(x + 3) | |
| 1. 6 + 4 x – (2x + 3) – 7 + 3(x – 2) | | 1. 3 + 2 2x – (3x – 1) + 9 – 4(x + 3) | |
| 1. 8 – 3 8 + 4(x – 4) – 2x – 3(2x – 3) | | 1. 15 – 5 4x – 2(x + 1) – 3x – 5(x + 4) | |
| 1. 2x – 5y – 2x – y + (x – y) | | 1. 10 + x – y + (x – 3) – (y – 6) | |
| 1. 3a + b – 2 – (a – b) + (b – 1) | | 1. a + – 2b – 3 +(5a – 2b) – (7a + 2) | |
| 1. 2a – 2b + – 4 – (3a – 2b) + (6a – b) | |  | |

Evidencia 7

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. 22**.** 23 | 1. 2 **.** 25 | | 1. 23**.** 23 | | 1. –23**.** 22 |
| 1. –2 **.** 23 | 1. –22**.** 25 | | 1. –24**.** 22 | | 1. –22**.** 26 |
| 1. a **.** a4 | 1. a2**.** a5 | | 1. a3**.** a2 | | 1. a2**.** a4 |
| 1. b3**.** b | 1. b3**.** b7 | | 1. 7a2**.** b3 | | 1. 3a **.** b2 |
| 1. 5a2**.** b3 | 1. 9a3**.** b3 | | 1. 2a2**.** a3 | | 1. 3a3**.** a4 |
| 1. 7a **.** a5 | 1. 6a **.** a | | 1. –3x**.** x3 | | 1. –2x2**.** x2 |
| 1. –5x2**.** x4 | 1. –4x3**.** x3 | | 1. –2x4**.** x4 | | 1. –9x6**.** x3 |
| 1. a(–b2) | 1. a2(–b4) | | 1. a3(–b3) | | 1. a2(–b)4 |
| 1. a(–b)3 | 1. a3(–b)5 | | 1. –a3(–b)2 | | 1. –a2(–b)3 |
| 1. (–a)2 (–b)3 | | 1. x3(–x)4 | | 1. x2(–x)2 | |
| 1. x5(–x)3 | 1. x2(–x)5 | | 1. –x2(–x)4 | | 1. –x3(–x)3 |
| 1. (x – 1)2 (x – 1) | | | 1. (2x + 1)2 (2x + 1)4 | | |
| 1. 3(x + 1)3 (x + 1)2 | | | 1. 2(x + y)3 (x + y)4 | | |
| 1. x3 + x | 1. x + x4 | | 1. x2 + x3 | | 1. x3 + x7 |
| 1. x2– x | 1. x7– x4 | | 1. x4– x3 | | 1. x6– x2 |
| 1. 3x3 + x3 | 1. 7x2 + x2 | | 1. 8x4 + 4x4 | | 1. 5x2 + 5x2 |
| 1. 3x4– x4 | 1. 5x2– 3x2 | | 1. 4x3– 6x3 | | 1. 3x5– 7x5 |
| 1. (a2b)(a2) | 1. (a3b)(b2) | | 1. (ab2)(a4) | | 1. (a2b2)(a3) |
| 1. (2x2y)(y3) | | 1. (xy2)(x3y) | | 1. (x2y)(xy) | |
| 1. (2x2)(3xy2) | | 1. (4ab)(ab3) | | 1. (3a2b)(ab3) | |
| 1. (–ab)(3a3) | | 1. 2a3(–5a2b) | | 1. 4a2b(–6b2c) | |
| 1. – 3x2y2(2x4y) | | 1. – xy2(2xy4) | | 1. 2xy(–32y3) | |
| 1. (–22a2)(a3b) | | 1. – 52ab2(–2a2) | | 1. – 22a2b(–9ab2) | |
| 1. – 23x3y(–52xy2) | | | 1. – 23x2(–32xy3) | | |
| 1. – x3y3(–33xy5) | | | 1. 7x3y2(4xy)(2y) | | |
| 1. 3x(4x2y)(–x4y2) | | | 1. x3z2(–y3z)(2x4y) | | |
| 1. –x3y(3x2y3)(–x2) | | | 1. –6x2y3(yz3)( –3xz2) | | |
| 1. 3xy3(–5x2y)(–4yz) | | | 1. –x2(–4xy2)( –5x3y) | | |
| 1. –3xy(–22y)(5x2) | | | 1. 2a3b(3a2)( –52b3) | | |
| 1. –3a2b2(22ab3)(–32a3b) | | | 1. (22)3 | | |
| 1. (33)2 | 1. (a2)2 | | 1. (a2)3 | | 1. (a3)3 |
| 1. (a2)4 | 1. (a2)5 | | 1. (–22)3 | | 1. (–32)2 |
| 1. (–23)3 | 1. (–a2)3 | | 1. (–a3)2 | | 1. (–a3)4 |
| 1. (–a4)3 | 1. (–a5)5 | | 1. (2a2)2 | | 1. (3a3)2 |
| 1. (3x2)4 | 1. (22x)3 | | 1. (23x2)2 | | 1. (32x3)3 |
| 1. (2x2y)2 | 1. (3xy2)3 | | 1. (2x3y2)2 | | 1. (3x2y3)3 |
| 1. (5x2y2)3 | 1. (22xy3)2 | | 1. (–xy2)3 | | 1. (–x3y2)7 |
| 1. (–x2y)3 | 1. (–2x2y)3 | | 1. (–ab3)2 | | 1. (–23a3b2)2 |
| 1. – (–22ab2)5 | | 1. – (–3a2b3)4 | | 1. x(2x2)2 | |
| 1. 3x(x3)2 | | 1. – 4x(x2)2 | | 1. – 5x(2x3)2 | |
| 1. – x2(2x2)3 | | 1. – 3x3(2x2)3 | | 1. a2b(ab3)2 | |
| 1. 3ab2(2b2)3 | | 1. 6a2b(2ab2)2 | | 1. (ab2)3(3a2)2 | |
| 1. (a2b)2(2ab2)3 | | | 1. (5a2b3)2(a2c)3 | | |
| 1. (22ab)2(ab2)3 | | | 1. (23ab3)2(a2c)3 | | |
| 1. (22ab4)3(3a2b)4 | | | 1. (23a2b)2(b2c)4 | | |
| 1. (ab2)2(2bc3)3(a2c) | | | 1. (ab2)3(2ª2bc2)2(ac2) | | |
| 1. (x2y)4(–x3y)2 | | | 1. (–22ab4)3(a2b)5 | | |
| 1. (–x2y)3(–23x3y)2 | | | 1. (– x2)3(–y)6(–x2y2)3 | | |
| 1. (–xy2)3(2x2yz2)2(–5xz3) | | | 1. (–2ab2)2(3a2b3)(–a2c3)4 | | |
| 1. (ab2c)2(–2bc3)3(5a2bc)4 | | | 1. (2ab3)2(–32a2c)3(–a4bc2)5 | | |
| 1. (–a2b2)3(23abc2)2(–3b4c5)4 | | | 1. a2(x – y)3 a (x – y)2 2 | | |
| 1. (2a2(x + 1) 2 –3a (x + 1) 3 | | | 1. a(x – 1)2 3 (a2(x – 1) 2 | | |
| 1. x2(x + 3)2 2 x3(x + 3)3 | | | 1. (x2)(x3) – (–x2) (x) | | |
| 1. – 2a2(b2) – a2(–b)3 | | | 1. (–22a2) (a3) + (32a2)(–a2) | | |
| 1. (–2ax)2 –(–a2)(x2) | | | 1. 3a3(–a3b) + (–a4)(a2b) | | |
| 1. 2a2(–b2) + (4a2)(–b)2 | | | 1. (–22a2)3 – a2(–2ª)4 | | |
| 1. (3a)3(–a2)3 + a(–a4)2 | | | 1. (–5x3)2(–y4) – (–6y2x3)2 | | |
| 1. (–22a2)( –b2)3 + (–3a)2(–b3)2 | | |  | | |

Evidencia 8

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. 6(x + 7) | 1. 5(x + 3) | | 1. 7(x – 4) |
| 1. 8(x – 1) | 1. –2(2x + 5) | | 1. –3(4x + 1) |
| 1. –4(x – 2) | 1. –5(x – 3) | | 1. x(y + 3) |
| 1. 2x(y + 1) | 1. x(2y + 5) | | 1. 2x(3y + 4) |
| 1. x(y – 2) | 1. 3x(y – 1) | | 1. 5x(2y – 3) |
| 1. 2x(6y – 5) | 1. –4x(y – 3) | | 1. –3x(y – 2) |
| 1. –2x(2y – 7) | 1. –x(8 – 2y) | | 1. –8x(3 – 4y) |
| 1. 3x(x + 2) | 1. 2x(x + 5) | | 1. 4x(x – 6) |
| 1. 6x(x – 3) | 1. –x(2x + 7) | | 1. –2x(3x + 8) |
| 1. –4x(x – 4) | 1. –8x(2x – 1) | | 1. 5x(x2– 2) |
| 1. 2x(3x2 + 2x) | 1. –4x(2x2+ 1) | | 1. –6x(x2– 4x) |
| 1. 4x2(x + 2) | 1. x2(x + 6) | | 1. 2x2(x – 3) |
| 1. x3(3 – 2x) | 1. x3(2 – x | | 1. –x2(3x + 1) |
| 1. –2x2(5x + 3) | 1. –x2(x2– 1) | | 1. –2x2(x2– 2) |
| 1. –4x2(x3– 1) | 1. x(x2– 2x + 1) | | 1. x(2x2 – x– 1) |
| 1. 2x(2x2 + x – 4) | | 1. 3x(x2 – 3x + 2) | |
| 1. –x(x2 + x – 5) | | 1. –2x(3x2 – x – 4) | |
| 1. –4x(3x2 – x – 1) | | 1. –3x(3 – 5x – x2) | |
| 1. 3x2(x3 – 2x2+ 1) | | 1. 2x2(3x2 + x – 5) | |
| 1. –2x3(x2 – 3x – 2) | | 1. –x4(x3 – x + 2) | |
| 1. 3ab(2a2 + 4b2– 1) | | 1. 2ab(–a2 + 3ab – b2) | |
| 1. ab2(a2 – 2a2b + b3) | | 1. –2a2b(a3 + 5a2b2 –3b4) | |
| 1. ab3(a2 – 2ab – 4b2) | | 1. 5a3b2(ab2 – b + 4a) | |
| 1. –a2b(3a2 + b2– 1) | | 1. –2ab3(2a2 – 3b2 – 2) | |
| 1. 3x(2x– 1) – x(x – 3) | | 1. 2x(5x– 6) – 3x(x – 5) | |
| 1. x(3x– 2) – 3x(x + 2) | | 1. 4x(x– 4) – 2x(2x – 3) | |
| 1. x(x2 – 2x + 5) + x2(2x – 4) | | 1. 2x(3x2 – 4x + 6) – x2(x –8) | |
| 1. 3x2(2x2 + x – 4) – x(3x2 – 9x – 1) | | 1. x2(2x2 – 3x – 4) – x(x3 – 3x2 – 4x) | |

Evidencia 9

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 72. | 6 | 2x – 1 | + | 3x + 1 |  |  | 73. | 4 | x + 4 |  | x + 1 |
| 3 | 2 |  |  | 2 | 4 |
| 74 | 10 | x + 2 | + | x + 3 |  |  | 75. | 18 | x + 2 |  | x – 8 |
| 5 | 2 |  |  | 9 | 3 |
| 76 | 36 | 4x – 3 | + | x – 1 |  |  | 77. | 6 | 3x – 1 |  | 2x + 3 |
| 9 | 4 |  |  | 2 | 3 |
| 78 | 12 | x – 4 | – | x + 2 |  |  | 79 | 21 | x + 1 |  | x – 2 |
| 3 | 4 |  |  | 3 | 7 |
| 80 | 12 | 2x + 13 | – | x – 4 |  |  | 81. | 30 | 2x – 1 |  | x – 8 |
| 3 | 4 |  |  | 5 | 6 |

Evidencia 10

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. (x + 3) (x + 1) | | 1. (x + 2) (x + 4) | | 1. (x + 6) (x + 2) | |
| 1. (x + 4) (x + 3) | | 1. (x + 5) (x – 2) | | 1. (x + 7) (x – 3) | |
| 1. (x + 3) (x – 6) | | 1. (x + 1) (x – 8) | | 1. (x – 1) (x + 3) | |
| 1. (x – 4) (x + 6) | | 1. (x – 7) (x + 4) | | 1. (x – 9) (x + 2) | |
| 1. (x + 1) (x – 1) | | 1. (x + 3) (x – 3) | | 1. (x – 6) (x + 6) | |
| 1. (x – 7) (x + 7) | | 1. (x – 1) (x – 6) | | 1. (x – 2) (x – 4) | |
| 1. (x – 3) (x – 5) | | 1. (x – 2) (x – 8) | | 1. (2x + 1) (x + 3) | |
| 1. (3x + 2) (x + 4) | | 1. (2x + 1) (x – 5) | | 1. (3x + 2) (x – 6) | |
| 1. (4x – 1) (x + 7) | | 1. (5x – 2) (x + 2) | | 1. (2x – 3) (x – 4) | |
| 1. (3x – 1) (x – 6) | | 1. (2x + 1) (3x + 2) | | 1. (4x + 1) (6x + 5) | |
| 1. (3x – 1) (3x + 4) | | 1. (2x – 3) (3x + 5) | | 1. (3x + 1) (4x – 1) | |
| 1. (2x + 7) (2x – 3) | | 1. (4x + 1) (2x – 9) | | 1. (5x + 2) (3x – 5) | |
| 1. (2x + 1) (2x – 1) | | 1. (3x + 2) (3x – 2) | | 1. (2x + 5) (2x – 5) | |
| 1. (4x + 3) (4x – 1) | | 1. (3x – 1) (4x – 3) | | 1. (2x – 4) (3x – 2) | |
| 1. (9x – 2) (4x – 1) | | 1. (2x – 5) (3x – 7) | | 1. (2 + x) (3 – x) | |
| 1. (4 + x) (5 – x) | | 1. (6 – x) (4 + x) | | 1. (1 – x) (9 + x) | |
| 1. (2 – x) (2 + x) | | 1. (6 – x) (6 + x) | | 1. (3 – x) (1 – x) | |
| 1. (6 – x) (2 – x) | | 1. (5 – x) (7 – x) | | 1. (4 – x) (9 – x) | |
| 1. (3 – 2x) (3 + 4x) | | 1. (2 – 9x) (3 + x) | | 1. (7 + 3x) (8 – 5x) | |
| 1. (x + 3) (2 – x) | | 1. (x + 1) (6 – x) | | 1. (x + 4) (1 – x) | |
| 1. (x + 7) (3 – x) | | 1. (2x + 1) (3 – 2x) | | 1. (3x + 4) (2 – 3x) | |
| 1. (x + 1)2 | 1. (x + 3) 2 | | 1. (2x + 1) 2 | | 1. (2x + 3) 2 |
| 1. (x – 2) 2 | 1. (x – 4) 2 | | 1. (2x – 1) 2 | | 1. (3x – 2) 2 |

Evidencia 11

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. (x + 2) (x + 3y) | 1. (x + y) (x + 5y) | | 1. (x + 3) (x – 4y) |
| 1. (x + 5y) (x – 3y) | | 1. (2x + 5y) (2x – 5y) | |
| 1. (3x + 2y) (3x – 2y) | | 1. (2x – 3y) (3x – 2y) | |
| 1. (x – 4y) (3x – 4y) | | 1. (xy + 2) (xy– 2) | |
| 1. (xy + 3) (xy– 4) | | 1. (xy– 6) (xy– 4) | |
| 1. (xy– 7) (xy– 5) | | 1. (x2 + 3) (x2– 2) | |
| 1. (2x2– 3) (3x2– 5) | | 1. (3x – y)2 | |
| 1. (x + 1) (2x2– 2x + 3) | | 1. (x – 1) (3x2– 2x – 2) | |
| 1. (x – 2) (x2+ 2x – 4) | | 1. (x + 2) (3x2– 6x – 5) | |
| 1. (x + 1) (x2– x + 1) | | 1. (x – 3) (x2 + 3x + 9) | |
| 1. (2x – 1) (4x2– 2x+ 1) | | 1. (3x +1) (9x2– 3x +1) | |

Evidencia 12

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. (x – 2y) (x2 + 2xy + 4y2) | | | 1. (2x – y) (4x2 + 2xy + y2) | | |
| 1. 4(x + 3) (x – 1) | | 1. 2(x + 1) (x + 4) | | 1. 3(x + 2) (x – 4) | |
| 1. – 2(x + 2) (2x – 1) | | | 1. –4(x + 3) (x – 2) | | |
| 1. – 3(x – 3) (x + 5) | | | 1. –2(2x + 1)(x – 4) | | |
| 1. – x(2x – 1) (x – 3) | | | 1. – x(3x – 1) (3x – 2) | | |
| 1. (x2+ 3x + 2) (x2– 3x + 2) | | | 1. (x2+ 2x – 1) (x2– 2x + 1) | | |
| 1. (2x2– 3x + 6) (x2+ 2x – 4) | | | 1. (3x2– x + 2) (2x2+ x – 3) | | |
| 1. (x2 + x + 1)2 | | 1. (x2– x + 2)2 | | 1. (x2 + 2x – 3)2 | |
| 1. (x2– 2x – 1)2 | | | 1. (x – 1) (x + 2) (x – 3) | | |
| 1. (x + 1) (x – 1) (x – 2) | | | 1. (2x + 1) (x – 1) (x – 4) | | |
| 1. (2x – 3) (x – 2) (3x + 1) | | | 1. (x + 2) (2x – 1) (3x – 2) | | |
| 1. (x + 1)3 | 1. (x + 2)3 | | 1. (x + y)3 | | 1. (2x + 1)3 |
| 1. (x – 1)3 | 1. (x – 3)3 | | 1. (2x + 1)3 | | 1. (3x – 2)3 |
| 1. (x + 1) (x + 3) + x(x – 4) | | | 1. (x + 2) (x – 3) + x(x + 1) | | |
| 1. (2x + 1) (x – 2) + x(x + 3) | | | 1. (x – 1) (x + 4) – x(x + 3) | | |
| 1. (x + 2) (x – 4) – x(x – 2) | | | 1. (2x + 3) (x + 1) – x(2x + 5) | | |

Evidencia 13

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | 25 |  | | | | | 2. | 28 |  | | | | | 3. | | 28 |  | | | | | | 4. | | 36 |
| 2 |  | | | | | 26 |  | | | | | 24 |  | | | | | | 33 |
| 5. | 3 |  | | | | | 6. | 34 |  | | | | | 7. | | 32 |  | | | | | | 8. | | 54 |
| 34 |  | | | | | 35 |  | | | | | 36 |  | | | | | | 56 |
| 9. | –214 | | |  | | | 10. | –34 | |  | | | | 11. | | 53 | |  | | | | | 12. | | 75 | |
| 27 | | |  | | | 36 | |  | | | | –56 | |  | | | | | –72 | |
| 13. | (–2)3 | | |  | | | 14. | (–3)3 | |  | | | | 15. | | (–3)4 | | |  | | | | 16. | | (–2)6 | | |
| 26 | | |  | | | 32 | |  | | | | 34 | | |  | | | | 23 | | |
| 17. | a5 | |  | | | | 18. | x8 |  | | | | | 19. | | x3 |  | | | | | | 20. | | a9 |
| a2 | |  | | | | x4 |  | | | | | x |  | | | | | | a3 |
| 21. | a6 | |  | | | | 22. | a4 |  | | | | | 23. | | x2 |  | | | | | | 24. | | x |
| a12 | |  | | | | a6 |  | | | | | x8 |  | | | | | | x5 |
| 25. | x10 | |  | | | | 26. | x7 |  | | | | | 27. | | a2 | |  | | | | | 28. | | a11 | |
| x10 | |  | | | | x7 |  | | | | | a2 | |  | | | | | a11 | |
| 29. | –a3 | |  | | | | 30. | –a9 | |  | | | | 31. | | b12 | |  | | | | | 32. | | b4 | |
| a5 | |  | | | | a6 | |  | | | | –b6 | |  | | | | | b4 | |
| 33. | (–a)3 | | |  | | | 34. | (–a)5 | |  | | | | 35. | | a5 | | |  | | | | 36. | | a3 | | |
| a4 | | |  | | | a2 | |  | | | | (–a)8 | | |  | | | | (–a)6 | | |
| 37. | (–a)8 | | | | |  | 38. | –a4 | | | |  | 39. | | (–a)7 | | | | | |  | 40. | | –a6 | | | | | |
| –a10 | | | | |  | (–a)4 | | | |  | –a7 | | | | | |  | – (–a)3 | | | | | |
| 41. | (x + 1)8 | | | |  | | 42 | (x – 2)6 | | |  | | 43. | | (x + 3)3 | | | | |  | | 44. | | (x – 1)10 | | | | |
| (x + 1)4 | | | |  | | (x – 2)3 | | |  | | (x + 3) | | | | |  | | (x – 1)2 | | | | |
| 45. | (x – 5) | | | |  | | 46 | (x + y)2 | | |  | | 47 | | (x – y)6 | | | | |  | | 48. | | (x + y)6 | | | | |
| (x – 5)5 | | | |  | | (x + y)6 | | |  | | (x – y)9 | | | | |  | | (x + y)8 | | | | |
| 49. | 3x2 | | |  | | | 50 | 7x5 | |  | | | 51 | | 6x6 | | | |  | | | 52. | | 15x4 | | | |
| x3 | | |  | | | x2 | |  | | | 8x4 | | | |  | | | 25x8 | | | |
| 53. | 3bx | | |  | | | 54. | 4xy3 | |  | | | 55. | | 2x2y | | | |  | | | 56. | | 6x3y2 | | | |
| 3b | | |  | | | 4y3 | |  | | | x2 | | | |  | | | y2 | | | |

Evidencia 14

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 57. | xy2 |  | | | 58. | x3y |  | | 59. | x2y3 |  | | 60. | x4y3 |
| xy |  | | | xy |  | | xy2 |  | | X2y2 |
| 61. | x6y4 |  | | | 62. | x3y3 |  | | 63. | a3b2 |  | | 64 | a2b6 |
| x3y2 |  | | | x2y |  | | a5b |  | | a2b8 |
| 65. | 9a2b5 | |  | | 66. | 42a5b2 | |  | 67. | 26ª3b2 | |  | 68. | –44a3b2 | |
| 36a6b10 | |  | | 70a9c | |  | 39b5b6 | |  | 66a5b8 | |
| 69. | –6a8b7 | | |  | 70. | 32a5b2 | |  | 71. | 36a10b7 | |  | 72. | –25a6b9 | |
| 18a4b9 | | |  | –8a3b6 | |  | –12a2b8 | |  | –5a12b3 | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 73. | 2b4 | 3 | 74. | 3a3 | 4 | | 75. | 2a2 | 6 | | 76. | a2b | 2 | |
| b3 |  | a6 | a5 |  | | ab2 |
| 77. | x3y2 | 4 | 78. | x2y4 | | 3 | 79. | 2x2y5 | | 3 | 80. | 2x2y5z | | 4 |
| xy3 |  | x4y2 | |  | 4xy6 | |  | 4xy6 | |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 81. | x4y2z7 | 3 | | 82. | 6x2y3z | | 3 | 83. | 12x3y2z4 | | 4 |
| 2x3y4z7 |  | | 8xy5z2 | | 18xy2z3 | |  |
| 84. | 21x5y3z | | 4 | 85. | –a2 | 6 | | 86. | –18a9 | 4 | |
| 28x4yz2 | |  | a5 |  | | 24a12 |  | |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 87. | 2x2b | 6 | 88. | x3y3 | 3 | 89. | x3y | 5 | 90. | –a5b2 | 3 |
| –xy |  | –x4y2 | –x2y2 |  | 2a2b |

Evidencia 15

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

Efectúe las operaciones indicaciones y simplifique:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | 2x + 2 |  | | | 2. | 3x – 6 |  | | | | 3. | 10x – 5 |
| 2 |  | | | 3 |  | | | | 5 |
| 4. | 7 + 7x |  | | | 5. | 4 – 8x |  | | | | 6. | 6 + 3x |
| 7 |  | | | 4 |  | | | | 3 |
| 7. | x2 + 2x |  | | | 8. | 3x2– 2x | |  | | | 9. | 6x2 + 3x |
| X |  | | | x | |  | | | 3x |
| 10. | 6x3– 12x2 | |  | | 11. | x3– 3x2 + x | | | |  | 12. | 4x3 + 6x2 – 10x | | |
| 6x | |  | | x | | | |  | 2x | | |
| 13. | 6ax + 3a |  | | | 14 | 10ax + 15x | | |  | | 15. | 2ax + 8bx | |
| 3a |  | | | 5x | | |  | | 2x | |
| 16. | 4x3+ 2x2 |  | | | 17 | 7x3– 14x2 | | |  | | 18. | 6x3– 4x2y | |
| 2x2 |  | | | 7x2 | | |  | | 2x2 | |
| 19. | 8x2y – 20x3 | | |  | 20. | 2x4– 7x3 – x2 | | | |  | 21. | x4– 5x3 – 6x2 | | |
| 4x2 | | |  | x2 | | | |  | x2 | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22. | 6x4– 12x3 + 18x2 | |  | 23. | 10x2y + 15x3 |  | | |
| 6x2 | |  | –5x2 |  | | |
| 24. | 4x4 + 8x3y2 | |  | 25. | 12x5 + 18x4– 6x3 | |  | | | |
| –4x3 | |  | –6x3 | |  | | | |
| 26. | 21x5 + 7x3– 14x2 | |  | 27. | 14x2y – 21xy |  | |
| –7x2 | |  | –7xy |  | |
| 28. | 27xy – 18x2y | |  | 29. | x3y2+ x4y2– x5y2 | |  | | |
| –9xy | |  | x3y2 | |  | | |
| 30. | x2y5– x3y4– x4y3 | |  | 31. | –36x3y2– 24x2y3 | |  | | |
| x2y3 | |  | –12x2y2 | |  | | |
| 32. | –30x2y4– 45x2y3z | |  | 33. | 2x2– x + 1 |  | |
| –15x2y3 | |  | x |  | |
| 34. | x2+ 3x – 2 |  | | 35. | 2x2– 5x – 6 |  | |
| x |  | | x |  | |

Evidencia 16

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.1**

Efectúe las operaciones indicaciones y simplifique:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 36. | 15x3– 3x2 + 6x | | | |  | | | | 37. | 4x3+ 6x2– 8x | | | | |  | | | |
| 3x2 | | | |  | | | | 2x2 | | | | |  | | | |
| 38. | 9x2– 6xy – 12y2 | | | |  | | | | 39. | 2x3y2– 4x2y3 + xy4 | | | | |  | | | |
| 3xy | | | |  | | | | –2x2y2 | | | | |  | | | |
| 40. | 2x4y2– 4x3y3 + 6x2y4 | | | | | |  | | 41. | x6– 2x4y2– 3x2y4 | | | | |  | | | |
| –2x3y3 | | | | | |  | | –3x3y3 | | | | |  | | | |
| 42 | (x + a)2 + (x + a) | | | |  | | | | 43 | 6(x – a)2 + 3(x – a) | | | | | |  | | | |
| (x +a) | | | |  | | | | 3(x – a) | | | | | |  | | | |
| 44 | (2x – a)2– a(2x – a) | | | | |  | | | 45 | (x – 3a)2 + 2a(x – 3a) | | | | | | |  | |
| (2x – a) | | | | |  | | | (x – 3a) | | | | | | |  | |
| 46. | (x + 3a)2 – 2a(x + 3a) | | | | | |  | | 47. | (2x + a)2– x(2x + a) | | | | | |  | | |
| (x + 3a) | | | | | |  | | (2x + a) | | | | | |  | | |
| 48. | (x + 2a)3 + (x + 2a)2 | | | | | |  | | 49. | (2x – a)3 – (2x – a)2 | | | | | | |  | |
| (x + 2a) | | | | | |  | | (2x – a) | | | | | | |  | |
| 50. | a5– 2a4 | + a (2a + 5) | | | | | |  | 51. | 2a4– 4a3 | + a2(a – 1) | | | | | | | |
| a2 |  | 2a2 |
| 52. | 3a4– 4a3 | | – 3a(a – 2) | | | | | | 53. | 18a4– 3a3 + 6a2 | | | – 2a(3a – 2) | | | | |
| a2 | | 3a2 | | |
| 54. | a4– 3a3– 2a2 | | | + (a + 1) (a + 2) | | | | | 55. | 6a2+ 4a3– 2a4 | | | | + (a – 1)(a + 3) | | | | |
| a2 | | | 2a2 | | | |
| 56. | 3a4– 6a3– 18a2 | | | | + (a – 2)(a – 3) | | | | 57. | a5– a4 + 2a3 | | – (a – 1)(a + 2) | | | | | | |
| –3a2 | | | | a3 | |
| 58 | a5– 4a4 + 6a3 | | | – (a – 2)(a + 3) | | | | | 59 | 4a5– 6a4– 8a3 | | | – (2ª – 1)(a + 3) | | | | | |
| a3 | | | 2a3 | | |
| 60 | 2a4b – 4a3b2 + 2a2b3 | | | | | | – (a + b)2 | | 61 | a3b3– 2a2b4– 15ab5 | | | | | | – (a – b)2 | | | |
| 2a2b | | | | | | ab2 | | | | | |

Evidencia 17

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Efectúe los siguientes productos notables:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. (x + 3) (x + 1) | | 1. (x + 2) (x + 4) | | 1. (x + 6) (x + 2) | |
| 1. (x + 4) (x + 3) | | 1. (x + 5) (x – 2) | | 1. (x + 7) (x – 3) | |
| 1. (x + 3) (x – 6) | | 1. (x + 1) (x – 8) | | 1. (x – 1) (x + 3) | |
| 1. (x – 4) (x + 6) | | 1. (x – 7) (x + 4) | | 1. (x – 9) (x + 2) | |
| 1. (x + 1) (x – 1) | | 1. (x + 3) (x – 3) | | 1. (x – 6) (x + 6) | |
| 1. (x – 7) (x + 7) | | 1. (x – 1) (x – 6) | | 1. (x – 2) (x – 4) | |
| 1. (x – 3) (x – 5) | | 1. (x – 2) (x – 8) | | 1. (2x + 1) (x + 3) | |
| 1. (3x + 2) (x + 4) | | 1. (2x + 1) (x – 5) | | 1. (3x + 2) (x – 6) | |
| 1. (4x – 1) (x + 7) | | 1. (5x – 2) (x + 2) | | 1. (2x – 3) (x – 4) | |
| 1. (3x – 1) (x – 6) | | 1. (2x + 1) (3x + 2) | | 1. (4x + 1) (6x + 5) | |
| 1. (3x – 1) (3x + 4) | | 1. (2x – 3) (3x + 5) | | 1. (3x + 1) (4x – 1) | |
| 1. (2x + 7) (2x – 3) | | 1. (4x + 1) (2x – 9) | | 1. (5x + 2) (3x – 5) | |
| 1. (2x + 1) (2x – 1) | | 1. (3x + 2) (3x – 2) | | 1. (2x + 5) (2x – 5) | |
| 1. (4x + 3) (4x – 1) | | 1. (3x – 1) (4x – 3) | | 1. (2x – 4) (3x – 2) | |
| 1. (9x – 2) (4x – 1) | | 1. (2x – 5) (3x – 7) | | 1. (2 + x) (3 – x) | |
| 1. (4 + x) (5 – x) | | 1. (6 – x) (4 + x) | | 1. (1 – x) (9 + x) | |
| 1. (2 – x) (2 + x) | | 1. (6 – x) (6 + x) | | 1. (3 – x) (1 – x) | |
| 1. (6 – x) (2 – x) | | 1. (5 – x) (7 – x) | | 1. (4 – x) (9 – x) | |
| 1. (3 – 2x) (3 + 4x) | | 1. (2 – 9x) (3 + x) | | 1. (7 + 3x) (8 – 5x) | |
| 1. (x + 3) (2 – x) | | 1. (x + 1) (6 – x) | | 1. (x + 4) (1 – x) | |
| 1. (x + 7) (3 – x) | | 1. (2x + 1) (3 – 2x) | | 1. (3x + 4) (2 – 3x) | |
| 1. (x + 1)2 | 1. (x + 3) 2 | | 1. (2x + 1) 2 | | 1. (2x + 3) 2 |
| 1. (x – 2) 2 | 1. (x – 4) 2 | | 1. (2x – 1) 2 | | 1. (3x – 2) 2 |

Evidencia 18

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Factorice completamente:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. x2 – 1 | | | 1. x2 – 9 | | | | 1. x2 – 16 | | | | 1. x2 – 36 | | | |
| 1. x2 – 49 | | | 1. x2 – 64 | | | | 1. x2 – 100 | | | | 1. x2 – 144 | | | |
| 1. x2 + 25 | | | 1. x2 + 81 | | | | 1. 4 – x2 | | | | 1. 25 – x2 | | | |
| 1. 81 – x2 | | | 1. 121 – x2 | | | | 1. 9x2 – 1 | | | | 1. 36x2 – 1 | | | |
| 1. 64x2 – 1 | | | 1. 81x2 – 1 | | | | 1. 4x2 – 9 | | | | 1. 4x2 – 49 | | | |
| 1. 4x2 – 81 | | | 1. 9x2 – 16 | | | | 1. 9x2 – 25 | | | | 1. 9x2 – 100 | | | |
| 1. 16x2 – 9 | | | 1. 16x2 – 49 | | | | 1. 16x2 – 81 | | | | 1. 4 – 25x2 | | | |
| 1. 4 – 49x2 | | | 1. 9 – 25x2 | | | | 1. 49 – 121x2 | | | | 1. x2 – 9y2 | | | |
| 1. 4x2 – y2 | | | 1. 9x2 – 16y2 | | | | 1. 9x2 – 25y2 | | | | 1. x4 – 81y2 | | | |
| 1. 9x2 – 4y4 | | | 1. x4 – 64 | | | | 1. 16x4 – y2 | | | | 1. 4a4 – 9b2c2 | | | |
| 1. a6 – b4 | | | 1. 2x2 – 18 | | | | 1. 8x2 – 18 | | | | 1. 3x2 – 12 | | | |
| 1. 4x2 – 16 | | | 1. 9x2 – 81 | | | | 1. 6x2 + 24 | | | | 1. x3 – x | | | |
| 1. x2y – 4y | | | | 1. 3ax2 – 27a3 | | | | 1. 8x3 + 72xy2 | | | | | |
| 1. 28b2c3 – 63b4c | | | | 1. 9x2y2 – y4 | | | | 1. 16x2 – x4 | | | | | |
| 1. 6x3 – 24x | | | | 1. 20x2y – 45y3 | | | | 1. 12x2y2 – 75a2 | | | | | |
| 1. 144x2y4 – 81a4b2 | | | | 1. 36a8b12 – 9c10 | | | | 1. x4 – 1 | | | | | |
| 1. x4 – 16 | | | | 1. x4 – 81 | | | | 1. x4 – y4 | | | | | |
| 1. 16x4 – y4 | | | | 1. 81x4 – y4 | | | | 1. 16x4 – 81y4 | | | | | |
| 1. 2x4 – 32y8 | | | | 1. 80x5 – 5x | | | | 1. 3x4 – 48y4 | | | | | |
| 1. x7 – x3 | | | | 1. 4x6 – 64x2 | | | | 1. (x + 1)2 – y2 | | | | | |
| 1. (x + 3)2 – 4y2 | | | | 1. (x – 2)2 – 9y2 | | | | 1. (x – 1)2 – 16y2 | | | | | |
| 1. x2 – (y + 1)2 | | | | 1. 4x2 – (y + 3)2 | | | | 1. 9x2 – (y + 4)2 | | | | | |
| 1. 16x2 – (y + 5)2 | | | | 1. x2 – (y – 1)2 | | | | 1. x2 – (y – 2)2 | | | | | |
| 1. 4x2 – (3y – 1)2 | | | | 1. 9x2 – (2y – 1)2 | | | | 1. 4x2 – 9(y – 3)2 | | | | | |
| 1. x2 – x2(y + 1)2 | | | | 1. 3x2 – 27(y – 4)2 | | | | 1. 2x2 – 32(2y + 1)2 | | | | | |
| 1. 8x2 – 18(3y – 2)2 | | | | | | | 1. x2y2 – y2(y – 4)2 | | | | | | | |
| 1. (x – 2)2 – (y + 1)2 | | | | | | | 1. (x + 3)2 – (2y + 1)2 | | | | | | | |
| 1. (x – 1)2 – (y – 3)2 | | | | | | | 1. (2x – 1)2 – (y – 2)2 | | | | | | | |
| 1. (x – 3)3 + y2(3 – x) | | | | | | | 1. (3x – 1)3 + y2(1 – 3x)2 | | | | | | | |
| 1. x2 – | 1 | 1. x2 – | | | 1 | 1. x2 – | | | 4 | 1. x2 – | | 4 |
| 4 | 9 | 9 | 25 |
| 1. x2 – | 4 | 1. x2 – | | | 16 | 1. x2 – | | | 1 | 1. x2 – | | 1 |
| 81 | 49 | 16 | 25 |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. 25x2 – | 9 | 1. 49x2 – | 16 |
| 16 | 49 |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. x4 – | 1 | 1. x4 – | 16 |
| 16 | 81 |

Evidencia 19

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Factorice completamente:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. x2 + 3x + 2 | 1. x2 + 7x + 6 | | 1. x2 + 4x + 4 |
| 1. x2 + 8x + 12 | 1. x2 + 7x + 12 | | 1. x2 + 9x + 18 |
| 1. x2 + 9x + 20 | 1. x2 + 10x + 24 | | 1. x2 + 11x + 30 |
| 1. x2 + 15x + 56 | 1. x2– 2x + 1 | | 1. x2– 6x + 5 |
| 1. x2– 5x + 6 | 1. x2– 7x + 10 | | 1. x2– 8x + 15 |
| 1. x2– 13x + 30 | 1. x2– 9x + 20 | | 1. x2– 12x + 32 |
| 1. x2– 12x + 35 | 1. x2– 13x + 42 | | 1. x2 + 2x – 3 |
| 1. x2 + 7x – 8 | 1. x2 + 6x – 16 | | 1. x2 + 13x – 30 |
| 1. x2 + 4x – 21 | 1. x2 + 12x – 45 | | 1. x2 + 5x – 36 |
| 1. x2 + 7x – 44 | 1. x2 + 2x – 35 | | 1. x2 + 2x – 48 |
| 1. x2– x – 2 | 1. x2– 5x – 6 | | 1. x2– 2x – 8 |
| 1. x2– 6x – 16 | 1. x2– 3x – 18 | | 1. x2– 13x – 48 |
| 1. x2– 2x – 24 | 1. x2– 7x – 44 | | 1. x2– 3x – 40 |
| 1. x2– 4x – 60 | 1. x2– x – 3 | | 1. x2– 5x – 4 |
| 1. x2 + x + 4 | 1. x2 + x + 6 | | 1. x2 + 6x + 8 |
| 1. x2 + 10x + 21 | 1. x2 + 11x + 24 | | 1. x2 + 8x + 16 |
| 1. x2– 8x + 12 | 1. x2– 7x + 12 | | 1. x2– 15x + 36 |
| 1. x2– 13x + 36 | 1. x2 + 4x – 12 | | 1. x2 + 6x – 27 |
| 1. x2 + 10x – 39 | 1. x2 + 4x – 32 | | 1. x2– 8x – 20 |
| 1. x2– 4x – 21 | 1. x2– 9x – 36 | | 1. x2– 3x – 28 |
| 1. x2– 3x + 8 | 1. x2– 7x – 6 | | 1. x2 + 60 + 17x |
| 1. x2 + 18 + 11x | 1. x2 + 30 + 13x | | 1. x2 + 28 + 11x |
| 1. x2 + 40 – 13x | 1. x2 + 18 – 11x | | 1. x2 + 32 – 18x |
| 1. x2 + 48 – 19x | 1. x2– 60 + 7x | | 1. x2– 80 + 2x |
| 1. x2– 18 + 7x | 1. x2– 24 + 5x | | 1. x2– 35 – 2x |
| 1. x2– 42 – x | 1. x2– 18 – 7x | | 1. x2– 36 – 16x |
| 1. x2 + 13x + 42 | 1. x2 + 16x + 63 | | 1. x2– 11x + 30 |
| 1. x2– 15x + 56 | 1. x2 + 6x – 40 | | 1. x2 + x – 30 |
| 1. x2– 5x – 24 | 1. x2– 6x – 72 | | 1. x2 + 12xy + 27y2 |
| 1. x2+ 12xy + 32y2 | | 1. x2+ 14xy + 48y2 | |
| 1. x2+ 12xy + 20y2 | | 1. x2– 9xy + 14y2 | |
| 1. x2– 6xy + 9y2 | | 1. x2– 11xy + 28y2 | |
| 1. x2– 19xy + 84y2 | | 1. x2+ 9xy – 36y2 | |
| 1. x2+ 5xy – 50y2 | | 1. x2+xy– 56y2 | |
| 1. x2+ 4xy – 60y2 | | 1. x2– 7xy – 30y2 | |
| 1. x2–xy– 30y2 | | 1. x2– 2xy – 63y2 | |
| 1. x2– 10xy – 24y2 | | 1. 4x2+ 24x + 36 | |
| 1. 6x2+ 30x + 24 | | 1. 2x2– 18x + 16 | |
| 1. 3x2– 24x + 21 | | 1. 5x2+ 5x – 10 | |
| 1. 7x2+ 7x – 42 | | 1. 9x2– 36x – 45 | |
| 1. 8x2– 24x – 32 | | 1. ax2+ 5ax + 6a | |
| 1. bx2+ 14bx + 45b | | 1. x3– 12x2+ 20x | |
| 1. x2y – 4xy + 4y | | 1. x4+ 2x2– 8x2 | |
| 1. x2y2– 2xy2– 15y2 | | 1. 3x3– 3x2– 18x | |
| 1. 2x2y – 8xy – 24y | | 1. x2y2+ 16xy + 60 | |
| 1. x2y2+ 18xy + 32 | | 1. x2y2– 12xy + 36 | |
| 1. x2y2– 14xy + 24 | | 1. x2y2+ 3xy – 54 | |
| 1. x2y2+ 4xy – 45 | | 1. x2y2– 11xy – 42 | |
| 1. x2y2– 5xy – 14 | | 1. x4+ 5x2+ 6 | |
| 1. x4 + 7x2 + 12 | 1. x4 – 3x2– 10 | | 1. x4 + 3x2– 18 |
| 1. x4 + 3x2– 4 | 1. x4 + 7x2– 8 | | 1. x4 + x2– 20 |
| 1. x4 – 3x2– 4 | 1. x4– 4x2 + 3 | | 1. x4– 7x2 + 6 |
| 1. x4– 6x2 + 8 | 1. x4– 7x2 + 12 | | 1. x4– 5x2 + 4 |
| 1. x4– 10x2 + 9 | 1. x4– 37x2 + 36 | | 1. x4– 50x2 + 49 |
| 1. x4– 20x2 + 64 | 1. x4– 40x2 + 144 | | 1. x4– 2x2 + 1 |
| 1. x4– 8x2 + 16 | 1. x4– 18x2 + 81 | | 1. x4– 32x2 + 256 |
| 1. (x + y)2 + 3(x + y) + 2 | | 1. (x + y)2 + 4(x + y) + 3 | |
| 1. (x + 3y)2 – 9(x + 3y) + 18 | | 1. (x – 2y)2 – 12(x – 2y) + 32 | |
| 1. (x + y)2 + (x + y) – 2 | | 1. (x – y)2 + (x – y) – 12 | |
| 1. (x + 2y)2 + (x + 2y) – 6 | | 1. (2x + y)2 + 6(2x + y) – 16 | |
| 1. (2x + y)2 – (2x – y) – 20 | | 1. (x – 3y)2 – 7(x – 3y) – 18 | |
| 1. (3x – y)2 – 4(3x – y) – 32 | | 1. (2x – 3y)2 – 9(2x – 3y) – 36 | |

Evidencia 20

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Factorice completamente:**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. 2x2 + 3x + 1 | 1. 2x2 + 9x + 4 | | 1. 3x2 + 7x + 2 |
| 1. 4x2 + 13x + 3 | 1. 2x2 + 7x + 6 | | 1. 2x2 + 13x + 15 |
| 1. 3x2 + 14x + 8 | 1. 4x2 + 11x + 6 | | 1. 4x2 + 4x + 1 |
| 1. 6x2 + 7x + 2 | 1. 2x2– 5x + 2 | | 1. 2x2– 11x + 5 |
| 1. 3x2– 4x + 1 | 1. 4x2– 9x + 2 | | 1. 2x2– 9x + 9 |
| 1. 3x2– 5x + 2 | 1. 3x2– 11x + 6 | | 1. 4x2– 7x + 3 |
| 1. 4x2– 8x + 3 | 1. 6x2– 11x + 4 | | 1. 2x2 + 5x – 3 |
| 1. 2x2 + 11x – 6 | 1. 2x2 + 15x – 8 | | 1. 3x2 + 11x – 4 |
| 1. 2x2 + x – 6 | 1. 2x2 + 5x – 12 | | 1. 3x2 + 7x – 6 |
| 1. 3x2 + 16x – 12 | 1. 4x2 + 9x – 9 | | 1. 4x2 + 21x – 18 |
| 1. 2x2– 3x – 2 | 1. 2x2– 7x – 4 | | 1. 2x2– 13x – 7 |
| 1. 3x2– 8x – 3 | 1. 3x2– 17x – 6 | | 1. 4x2– 15x – 4 |
| 1. 2x2– 9x – 18 | 1. 3x2– 4x – 4 | | 1. 3x2– 13x – 10 |
| 1. 4x2– 5x – 6 | 1. 2x2– 3x + 5 | | 1. 3x2 + 4x + 7 |
| 1. 3x2 + 7x – 4 | 1. 6x2– 3x – 4 | | 1. 2x2 + 11x + 12 |
| 1. 2x2 + 15x + 18 | 1. 2x2– 13x + 15 | | 1. 3x2– 14x + 8 |
| 1. 2x2 + x – 3 | 1. 6x2 + x – 2 | | 1. 4x2– 17x – 15 |
| 1. 4x2– 16x – 9 | 1. 3x2 + 12x + 20x | | 1. 4x2 + 12x + 19x |
| 1. 4x2 + 6 – 11x | 1. 4x2 + 12 – 19x | | 1. 6x2– 3 + 7x |
| 1. 6x2– 6 + 5x | 1. 6x2– 4 – 5x | | 1. 8x2– 3 – 2x |
| 1. 4x2 + 27x + 18 | 1. 6x2 + 11x + 3 | | 1. 4x2– 20x + 9 |
| 1. 6x2– 7x + 2 | 1. 6x2 + 23x – 18 | | 1. 9x2 + 9x – 4 |
| 1. 6x2– 7x – 3 | 1. 8x2– 10x – 3 | | 1. 4x2 + 8x + 5 |
| 1. 6x2 + 11x – 4 | 1. 9x2– 6x + 8 | | 1. 12x2– 17x – 6 |
| 1. 6x2 + 17x + 12 | 1. 6x2 + 31x + 18 | | 1. 6x2– 13x + 6 |
| 1. 6x2– 35x + 36 | 1. 6x2 + 19x – 36 | | 1. 12x2 + 5x – 2 |
| 1. 6x2– 7x – 20 | 1. 12x2– 5x – 2 | | 1. 6x2y2 + 23xy + 20 |
| 1. 12x2y2 + 25xy + 12 | | 1. 12x2y2– 11xy + 2 | |
| 1. 12x2y2– 17xy + 6 | | 1. 12x2y2 + xy– 6 | |
| 1. 12x2y2 + 19xy – 18 | | 1. 12x2y2– 7xy – 12 | |
| 1. 12x2y2– 23xy – 24 | | 1. 4x2 + 8xy + 3y2 | |
| 1. 6x2 + 11xy + 4y2 | | 1. 6x2 + 13xy + 6y2 | |
| 1. 9x2 + 12xy + 4y2 | | 1. 6x2– 11xy + 3y2 | |
| 1. 6x2– 17xy + 12y2 | | 1. 12x2– 25xy + 12y2 | |
| 1. 6x2– 23xy + 21y2 | | 1. 6x2 + 5xy – 4y2 | |
| 1. 6x2 + xy– 12y2 | | 1. 9x2 + 6xy – 8y2 | |
| 1. 6x2 + 7xy – 20y2 | | 1. 3x2– 7xy – 6y2 | |
| 1. 3x2– 16xy – 12y2 | | 1. 4x2– 8xy – 5y2 | |
| 1. 6x2– 5xy – 6y2 | | 1. 9x2 + 39x + 12 | |
| 1. 8x2 + 18x + 4 | | 1. 10x2– 45x + 20 | |
| 1. 16x2– 20x + 4 | 1. 6x2 + 27x – 15 | | 1. 28x2 + 21x – 7 |
| 1. 2x3– 5x2– 3x | 1. 3x3– 5x2– 2x | | 1. 2x2y + 5xy + 3y |
| 1. 4x2y + 7xy + 3y | 1. 4x4– 7x3 + 6x2 | | 1. 3x4– 8x3 + 4x2 |
| 1. 2x2y2 + 3xy2– 9y2 | | 1. 4x2y2 + 13xy2– 12y2 | |
| 1. 4x3– 2x2– 12x | | 1. 36x3– 36x2– 16x | |
| 1. 4 – 4x – 3x2 | 1. 6 – 5x – 4x2 | | 1. 3 – 2x – 8x2 |
| 1. 4 – 15x – 4x2 | 1. 15 – 7x – 2x2 | | 1. 21 – 5x – 6x2 |
| 1. 2 + x – 3x2 | 1. 3 + x – 4x2 | | 1. 4 + 11x – 3x2 |
| 1. 12 + 5x – 2x2 | 1. 12 + x – 6x2 | | 1. 18 + 23x – 6x2 |
| 1. 2x4+ 7x2+ 3 | 1. 6x4+ 7x2+ 2 | | 1. 6x4+ 23x2– 4 |
| 1. 5x4+ 8x2– 4 | 1. 4x4– 11x2 + 6 | | 1. 9x4– 29x2 + 6 |
| 1. 4x4+ 15x2– 4 | 1. 9x4+ 14x2– 8 | | 1. 2x4– x2– 1 |
| 1. 2x4– 5x2– 12 | 1. 8x4– 6x2– 27 | | 1. 8x4– 29x2– 12 |
| 1. 18x4– 29x2 + 3 | 1. 27x4– 30x2 + 8 | | 1. 36x4– 13x2 + 1 |
| 1. 4x4– 13x2 + 9 | 1. 4x4– 45x2 + 81 | | 1. 36x4– 85x2 + 9 |
| 1. 9x4– 13x2 + 4 | | 1. 25x4– 104x2 + 16 | |
| 1. 16x4– 8x2 + 1 | | 1. 16x4– 72x2 + 81 | |
| 1. 81x4– 18x2 + 1 | | 1. 256x4– 288x2 + 81 | |
| 1. 3(x + y)2 + 10(x + y) + 3 | | 1. 4(x – y)2 + 9(x – y) + 2 | |
| 1. 6(2x – y)2– 25(2x – y) + 4 | | 1. 8(x – 2y)2– 14(x – 2y) + 3 | |
| 1. 2(x + y)2– 3(x + y) + 1 | | 1. 6(x + 2y)2– 11(x – 2y) + 4 | |
| 1. 3(x – y)2 + (x – y) – 2 | | 1. 6(2x + y)2 + (2x + y)– 12 | |
| 1. 36(x – y)2 + 5(x – y) – 24 | | 1. 4(x – y)2– 11(x – y)– 3 | |
| 1. 6(x – 2y)2– 11(x – 2y) – 2 | | 1. 6(2x – y)2– 5(2x – y)– 6 | |
| 1. 12(x – 3y)2– 5(x – 3y) – 3 | | 1. 12(3x + y)2– 7(3x + y)– 12 | |

Evidencia 21

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.2**

**Factorice completamente:**

Factorice completamente.

|  |  |  |  |
| --- | --- | --- | --- |
| 1. 24x + 18 | 1. 2xy + 10x | | 1. 6x3– 3x2 |
| 1. 9x2y – 3xy | 1. 28xy2 + 21x2y | | 1. ax2– 4a3 |
| 1. 16ax – 40a2 | 1. 18x2y2– 27xy2 | | 1. x2– 4 |
| 1. x2– 25 | 1. x2– 81 | | 1. x2– 121 |
| 1. 1 – x2 | 1. 9 – x2 | | 1. 16 – x2 |
| 1. 36 – x2 | 1. 49 – x2 | | 1. 64 – x2 |
| 1. 100 – x2 | 1. 144 – x2 | | 1. 4x2– 25 |
| 1. 4x2– 121 | 1. 9x2– 49 | | 1. 16x2– 25 |
| 1. 4 – 9x2 | 1. 4 – 81x2 | | 1. 9 – 16x2 |
| 1. 16 – 81x2 | 1. 4x2– 25y2 | | 1. x4– 4y2 |
| 1. x2– 9y2 | 1. x6– 16y2 | | 1. x4– 25y6 |
| 1. 2x2– 32 | 1. 12x2– 27 | | 1. 4x2– 36 |
| 1. 9x2– 144 | 1. x4– x2 | | 1. 4x4y – y |
| 1. x2 + 15x + 54 | 1. x2 + 16x + 64 | | 1. x2 + 17x + 72 |
| 1. x2 + 16x + 48 | 1. x2 + 14x + 24 | | 1. x2 + 14x + 40 |
| 1. x2– 13x + 22 | 1. x2– 11x + 24 | | 1. x2– 15x + 50 |
| 1. x2– 14x + 48 | 1. x2– 16x + 39 | | 1. x2– 16x + 63 |
| 1. x2 + 8x – 9 | 1. x2 + x – 20 | | 1. x2 + 6x – 55 |
| 1. x2 + x – 72 | 1. x2 + 3x – 40 | | 1. x2 + 5x – 84 |
| 1. x2– 32 – 4x | 1. x2– 56 – x | | 1. x2– 30 – 13x |
| 1. x2– 27 – 6x | 1. x2– 60 – 7x | | 1. x2– 15 – 2x |
| 1. x2 + 18xy + 72y2 | | 1. x2 + 17xy + 30y2 | |
| 1. x2– 16xy + 60y2 | | 1. x2– 6xy + 8y2 | |
| 1. x2 + 10xy – 24y2 | | 1. x2 + 16xy – 36y2 | |
| 1. x2– 11xy – 42y2 | | 1. x2– 6xy – 40y2 | |
| 1. x2y2 + 18xy + 81 | | 1. x2y2 + 19xy + 48 | |
| 1. x2y2– 9xy + 18 | | 1. x2y2– 16xy + 48 | |
| 1. x2y2 + 3xy – 18 | | 1. x2y2 + 7xy – 30 | |
| 1. x2y2– 2xy – 48 | | 1. x2y2– 14xy – 32 | |
| 1. 6x2 + 24x + 18 | | 1. 4x2 + 20x + 24 | |
| 1. 3x2– 24x + 21 | 1. 7x2– 35x + 28 | | 1. 5x2 + 15x – 20 |
| 1. 2x2 + 16x – 40 | 1. 8x2– 8x – 96 | | 1. 3x2– 9x – 30 |
| 1. x3 + 16x2 + 28x | | 1. x3 + 18x2 + 45x | |
| 1. x2y – 17xy + 30y | | 1. x2y – 18xy + 72y | |
| 1. x4 + 6x3– 72x2 | | 1. x4 + 8x3– 48x2 | |
| 1. x5– 2x4– 80x3 | | 1. x5– 12x4– 45x3 | |

Evidencia 22

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.3**

En cada uno de los siguientes ejercicios, encuentre el mínimo común múltiplo.

|  |  |  |  |
| --- | --- | --- | --- |
| 1. 8, 12 y 18 | 1. 6, 8 y 14 | | 1. 12, 15 y 20 |
| 1. 18, 24 y 30 | 1. 24, 28 y 42 | | 1. 36, 48 y 60 |
| 1. x, x2 y 4x | 1. 9x, 12x y 4x2 | | 1. 3x, 5y y 2x2 |
| 1. x2, xy y y2 | 1. x2y, xy2 y y2 | | 1. xy, xy2 y xy3 |
| 1. 4xy, 14xy2 y 8x2y | | 1. 4x2y, 10y2 y 14x | |
| 1. 8x, 12x2y y 32y3 | | 1. 9xy, 12y3y y 15x2y | |
| 1. x(x + 3), 4x2  y 2(x + 1) | | 1. 6x(x – 2), 9(x – 2) y x2(x – 2) | |
| 1. x2 (x + 3), x(x+ 3) y 3(x+ 3) | | | |
| 1. (x – 1)2, x(x– 1) y x2(x– 3) | | | |
| 1. x + 1, x – 2 y (x + 1)(x– 2) | | | |
| 1. 2x – 1, 2x – 3 y (2x – 1)(2x– 3) | | | |
| 1. x – 4, 4(x – 1) y (x – 4)(x– 1) | | | |
| 1. (x + 2)2, x + 5 y (x + 2)(x+ 5) | | | |
| 1. (x – 3)(x – 6) y (x – 2)(x– 6) | | | |
| 1. (x – 2)(x – 4) y (x – 2)(x– 8) | | | |
| 1. (3x + 1)(x + 3) y (3x + 1)2 | | | |
| 1. (x – 3)(x + 2), (x + 2)(x– 6) y (x – 3)(x – 6) | | | |
| 1. (2x + 3)(3x + 2), (2x + 3)(x– 4), y (3x + 2)(x – 4) | | | |
| 1. (x – 1)(x + 3), (3 + x)(2– x), y (x – 1)(x – 2) | | | |
| 1. (2x – 1)(x + 4), (x + 1)(x+ 4), y (1 – 2x)(1 + x) | | | |
| 1. (2x + 3)(3x – 1), (2x + 3)(x+ 5), y (5 + x)(1 – 3x) | | | |
| 1. (x – 2)(x – 6), (x – 2)(x+ 2), y (2 + x)(6 – x) | | | |
| 1. (4 + x)(2 – x), (x + 1)(x– 2), y (x + 1)(x + 4) | | | |
| 1. (2x – 3)(3x + 1), (3 – 2x)(1+ x), y (3x + 1)(x + 1) | | | |
| 1. x2 + 1, x + 1, y (x + 1)2 | | | |
| 1. (x – 2)2,x2 + 4, y (x – 2 | | | |
| 1. 4x – 16, 6x – 24, y 9x – 36 | | | |
| 1. x2– 3x, 2x – 6, y 7x – 21 | | | |
| 1. 6x + 3, 8x + 4, y 4x2 + 2x | | | |
| 1. 2x2+ 2x, 3x2+ 3x, y 4x + 4 | | | |
| 1. x2– x, x3– x2, y 2x – 2 | | | |
| 1. x2– 16, 2x – 8, y 3x + 12 | | | |
| 1. 4x2– 9, 12x – 18, y 18x – 27 | | | |
| 1. x2– 2x, x2– 4, y x2 + 2x | | | |
| 1. x2– x, x2– 1, y x2 + x | | | |
| 1. x2– 12x, x2– 16x + 48, y x2 – 4x | | | |
| 1. x2+ 5x + 6, x2+ 2x, y x2 + 3x | | | |
| 1. x2– 2x – 8, x2– 4x, y x3 + 2x2 | | | |
| 1. x2– 1, x2 + 4x + 3, y x2 + 2x – 3 | | | |
| 1. x2+ x – 2, x2 – 4x + 3, y x2 – x – 6 | | | |
| 1. x2– 3x – 4, x2 + 3x + 2, y x2 – 2x – 8 | | | |
| 1. x2 + x – 6, x2 + 2x – 8, y x2 + 7x + 12 | | | |
| 1. x2– 8x + 12, x2 – 6x + 8, y x2 – 10x + 24 | | | |
| 1. x2– 7x + 12, x2 – 11x + 24, y x2 – 12x + 32 | | | |
| 1. 2x2+ 7x – 4, 3x2 + 10x – 8, y 6x2 – 7x + 2 | | | |
| 1. 3x2+ 7x + 2, 2x2 + 5x + 2, y 6x2 + 5x + 1 | | | |
| 1. 8x2+ 6x – 9, 2x2 + 15x + 18, y 4x2 + 21x – 18 | | | |
| 1. 3x2+ 11x – 4, 2 – 5x – 3x2, y x2 + 6x + 8 | | | |
| 1. 4x2– 17x + 4, 6 – 23x – 4x2, y x2 + 2x – 24 | | | |
| 1. 3x2– x – 14, x2 + 7x + 10, y 35 – 8x – 3x2 | | | |
| 1. 24x2– 7x – 6, 8x2 + 11x + 3, y 2 – x – 3x2 | | | |

Evidencia 22

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.3**

Efectúa las siguientes operaciones con fracciones y simplificar.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | 6 | | | + | 2 | | | | – | | | | 5 | | | | 2. | | | | | | | | | | 7 | – | | | 3 | | | – | | | 1 | | | | 3. | | | | | | | | | | | 2 | | | | | | + | 4 | | | | | | | | – | 8 | | | | | | |
| x | | | x | | | | x | | | | 2x | 2x | | | 2x | | | | x2 | | | | | | x2 | | | | | | | | x2 | | | | | | |
| 4. | 20 | | | – | 15 | | | | – | | | | 5 | | | | 5. | | | | | | | | | | x | | + | | | 3 | | | | | |  | | | | | | 6. | | | | | | | | | x | | | | | | + | | 1 | | | | | | | | |  | | | | | |
| x2 | | | x2 | | | | x2 | | | | x + 2 | | x + 2 | | | | | | x + 3 | | | | | | x+ 3 | | | | | | | | |
| 7. | x | | | | | + | 4 | | | | | | | | |  | | | 8. | | | | | | | | 2x | | | + | | | 5 | | | | | |  | | | | | | 9. | | | | | | | | x | | | | | | – | | | | | | 2 | | | | | | | | |  | | | |
| 2x – 1 | | | | | 2x – 1 | | | | | | | | | 3x – 5 | | | 3x – 5 | | | | | | 2x + 7 | | | | | | 2x + 7 | | | | | | | | |
| 10. | 3x | | | | | – | 4 | | | | | | | | |  | | | 11. | | | | | | | | x + 1 | | | – | | | x | | | | | |  | | | | | | 12. | | | | | | | | x – 3 | | | | | | + | | | | | | 2x | | | | | | | | |  | | | |
| 5x – 4 | | | | | 5x – 4 | | | | | | | | | x – 2 | | | x – 2 | | | | | | 2x + 1 | | | | | | 2x + 1 | | | | | | | | |
| 13. | x – 2 | | | | | + | 6 | | | | | | | | |  | | | 14. | | | | | | | | 2x – 3 | | | + | | | 8 | | | | | |  | | | | | | 15. | | | | | | | | 4x | | | | | | – | | | | | | 3 | | | | | | | | |  | | | |
| x + 4 | | | | | x + 4 | | | | | | | | | 2x + 5 | | | 2x + 5 | | | | | | 4x – 3 | | | | | | 4x – 3 | | | | | | | | |
| 16. | x | | | | | – | 5 | | | | | | | | |  | | | 17. | | | | | | | | x – 1 | | | + | | | 1 – x | | | | | |  | | | | | | 18. | | | | | | | | 2x – 1 | | | | | | + | | | | | | 1 – 2x | | | | | | | | |  | | | |
| x – 5 | | | | | x – 5 | | | | | | | | | 2x – 3 | | | 2x – 3 | | | | | | 3x – 2 | | | | | | 3x – 2 | | | | | | | | |
| 19. | 3x + 2 | | | | | + | x – 2 | | | | | | | | |  | | | 20. | | | | | | | | 2x + 1 | | | – | | | x + 8 | | | | | |  | | | | | | 21. | | | | | | | | 14x | | | | | | – | | 7x – 2 | | | | | | | | | | |  | | | |
| 2x + 3 | | | | | 2x + 3 | | | | | | | | | 3x – 7 | | | 3x – 7 | | | | | | 7x + 2 | | | | | | 7x + 2 | | | | | | | | | | |
| 22. | x – 1 | | | | | + | x + 1 | | | | | | | | |  | | | 23. | | | | | | | | 4x – 1 | | | + | | | 3x + 1 | | | | | | |  | | | | | | 24. | | | | | | | | x + 2 | | | | | | + | | 3x – 2 | | | | | | | | | | |  | | | |
| 3x2 | | | | | 3x2 | | | | | | | | | 5x2 | | | 5x2 | | | | | | | 6x3 | | | | | | 6x3 | | | | | | | | | | |
| 25. | 5x2 – 4 | | | | | + | x2 + 4 | | | | | | | | |  | | | 26. | | | | | | | | | | | | | | | | 2x2 + 1 | | | | | | | – | | | | | 2x2 – 1 | | | | | | | | |  | | | | | | |
| 8x3 | | | | | 8x3 | | | | | | | | | 4x2 | | | | | | | 4x2 | | | | | | | | |
| 27. | 9x2 + 7 | | | | | – | 7 – 3x2 | | | | | | | | | | |  | | 28. | | | | | | | | | | | | | | | | x3 – 3 | | | | | | | – | | | | | 7x3 – 3 | | | | | | | | |  | | | | | | |
| 6x3 | | | | | 6x3 | | | | | | | | | | | 2x4 | | | | | | | 2x4 | | | | | | | | |
| 29. | 3x2 – 1 | | | | | – | 6x2 – 1 | | | | | | | | | | |  | | 30. | | | | | | | | | | | | | | | | 2x | | | | | | | – | | | | | 2 | | | | | | | | |  | | | | | | |
| 3x3 | | | | | 3x3 | | | | | | | | | | | x – 1 | | | | | | | x – 1 | | | | | | | | |
| 31. | 6x2 | | | | | – | 7x | | | | | | | | | | |  | | 32. | | | | | | | | | | | | | | | | x2 | | | | | | | – | | | | | x | | | | | | | | |  | | | | | | |
| 6x – 7 | | | | | 6x – 7 | | | | | | | | | | | x2 + x | | | | | | | x2 + x | | | | | | | | |
| 33. | 3x – 4 | | | | | + | x – 6 | | | | | | | | | | |  | | 34. | | | | | | | | | | | | | | | | 4x2 + 3x | | | | | | | + | | | | | x2 – x | | | | | | | | |  | | | | | | |
| 2x – 5 | | | | | 2x – 5 | | | | | | | | | | | 5x + 2 | | | | | | | 5x + 2 | | | | | | | | |
| 35. | 3x + 1 | | | | | – | x + 1 | | | | | | | | | | |  | | 36. | | | | | | | | | | | | | | | | 2x+ 3 | | | | | | | – | | | | | 3– x | | | | | | | | |  | | | | | | |
| 4x – 2 | | | | | 4x – 2 | | | | | | | | | | | 3x – 6 | | | | | | | 3x – 6 | | | | | | | | |
| 37. | x + 4 | | | | | – | x – 4 | | | | | | | | | | |  | | 38. | | | | | | | | | | | | | | | | 7x2 | | | | | | | – | | | | | 6x – 2x2 | | | | | | | | |  | | | | | | |
| 4x2 – 8x | | | | | 4x2 – 8x | | | | | | | | | | | 9x2 – 4 | | | | | | | 9x2 – 4 | | | | | | | | |
| 39. | x2 | | | | | – | x – x2 | | | | | | | | | | |  | | 40. | | | | | | | | | | | | | | | | 2x2 + x | | | | | | | – | | | | | x2 – 2x | | | | | | | | |  | | | | | | |
| 4x2 – 1 | | | | | 4x2 – 1 | | | | | | | | | | | x2 – 9 | | | | | | | x2 – 9 | | | | | | | | |
| 41. | | 2x – 1 | | | | | | + | | | | | | 3 | | | | | | |  | | | 42. | | | | | | | | | | | 5x– 7 | | | | | | | | | | | | | | | + | | | | | 1 – x | | | | | | | | | | | | | | |  | | | | | | | |
| x2 – 3x – 4 | | | | | | x2 – 3x – 4 | | | | | | | 6x2 – 11x + 3 | | | | | | | | | | | | | | | 6x2 – 11x + 3 | | | | | | | | | | | | | | |
| 43. | | | x2 – 3x | | | | | | | | + | | | | x2 – x | | | | | | |  | | | 44. | | | | | | | | | | x2 – 4x | | | | | | | | | | | | | | | + | | | | | 4x – 4 | | | | | | | | | | | | | |  | | | | | | | | |
| x2 – 3x + 2 | | | | | | | | x2 – 3x + 2 | | | | | | | x2 – x – 6 | | | | | | | | | | | | | | | x2 – x – 6 | | | | | | | | | | | | | |
| 45. | 2x2 | | | | | | | | | – | | x | | | | | | | | | | |  | | | 46. | | | | | | | | | x2 + 3x | | | | | | | | | | | | | | – | | x2 – 12 | | | | | | | | | | | | | | |  | | | | |
| 2x2 + 5x – 3 | | | | | | | | | 2x2 + 5x – 3 | | | | | | | | | | | x2 + x – 12 | | | | | | | | | | | | | | x2 + x – 12 | | | | | | | | | | | | | | |

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| 47. | x2 + 2 | – | | | x2 – 6x | | | | | | |  | | 48. | | | | | | | | | | | 2x2 – 3x | | | – | | | | x2 + 3x | | | |  | | |
| 3x2 – 5x – 2 | 3x2 – 5x – 2 | | | | | | | 2x2 – 11x – 6 | | | 2x2 – 11x – 6 | | | |
| 49. | 6x2 + x | – | | | 2x2 – x | | | | | | |  | | 50. | | | | | | | | | | | 16x2 + 3 | | | | | – | | | 3 – 4x | | | | |  | | |
| 6x2 – x – 2 | 6x2 – x – 2 | | | | | | | 16x2 + 16x + 3 | | | | | 16x2 + 16x + 3 | | | | |
| 51. | 3x + 16 | – | | | x2 + 3x | | | | | | |  | | 52. | | | | | | | | | | | 2x2 + 9 | | | | | – | | | 2x2 + 6x | | | | |  | | |
| x2 – 2x – 8 | x2 – 2x – 8 | | | | | | | 2x2 – 11x + 12 | | | | | 2x2 – 11x + 12 | | | | |
| 53. | 3x – 4x2 | – | | | 2x2 – x | | | | | | |  | | 54. | | | | | | | | | | | 3x2 – x2 | | | | – | | 3x2 + 1 | | | | | |  | | |
| 6x2 + 5x – 6 | 6x2 + 5x – 6 | | | | | | | 8x2 – 2x – 1 | | | | 8x2 – 2x – 1 | | | | | |
| 55. | x2 – 3 | + | | | 2x – 1 | | | | | | | – | | x + 12 | | | |  | | |
| x2 – 8x + 12 | x2 – 8x + 12 | | | | | | | x2 – 8x + 12 | | | |  | | |
| 56. | 2x2 + 7 | – | | | x2 – 3x | | | | | | | + | | x – 4 | | | |  | | |
| x2 + 2x – 3 | x2 + 2x – 3 | | | | | | | x2 + 2x – 3 | | | |  | | |
| 57. | 6x2 + x | – | | | 2x + 9 | | | | | | | – | | 4x – 3 | | | |  | | |
| 2x2 – 9x + 9 | 2x2 – 9x + 9 | | | | | | | 2x2 – 9x + 9 | | | |  | | |
| 58. | 3x2 – 2 | | | – | | | | x2 – 6x | | | | | – | | x + 10 | | | |  | | |
| 3x2 + 10x – 8 | | | 3x2 + 10x – 8 | | | | | 3x2 + 10x – 8 | | | |  | | |
| 59. | 7x2 – 20x | | | | | + | | | 6x2 – 10x | | | | | | | – | 6x – 3x2 | | | | | | | | |  |
| 16x2 – 48x + 27 | | | | | 16x2 – 48x + 27 | | | | | | | 16x2 – 48x + 27 | | | | | | | | |  |
| 60. | 22x + 15 | | | | | – | | | 20 – 30x | | | | | | | – | 4 – 2x | | | | | | | | |  |
| 12x2 + 52x – 9 | | | | | 12x2 + 52x – 9 | | | | | | | 12x2 + 52x – 9 | | | | | | | | |  |
| 61. | x + 10x | | | | | – | | | 12x2 – 3x | | | | | | | – | 5x + 9x2 | | | | | | | | |  |
| 20x2 + 7x – 6 | | | | | 20x2 + 7x – 6 | | | | | | | 20x2 + 7x – 6 | | | | | | | | |  |
| 62. | x2 + 4x | | | | | + | | | x2 – 2x | | | | | | | – | 3x | | | | | | | | |  |
| 4x4 – 13x2 + 3 | | | | | 4x4 – 13x2 + 3 | | | | | | | 4x4 – 13x2 + 3 | | | | | | | | |  |
| 63. | x2 + y2 | | – | | | | y2 + 3y | | | | | – | | x2 – 3x – 6 | | | | | |  | | |
| x2 – (y – 2)2 | | x2 – (y – 2)2 | | | | | x2 – (y – 2)2 | | | | | |  | | |
| 64. | x2 + 2x – 12 | | | | | | | | | – | x2 – y2 | | | | | | | | | | | – | | y2 – 2y2 | | | | | | | | | |  |
| (x + y)2 – 8(x + y) + 12 | | | | | | | | | (x + y)2 – 8(x + y) + 12 | | | | | | | | | | | (x + y)2 – 8(x + y) + 12 | | | | | | | | | |  |

Evidencia 23

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.3**

**Efectúe las siguientes multiplicaciones y simplifique:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 1. | 36 | **.** | 39 | | **.** | | 20 | 2. | | | 51 | | **.** | | | 63 | | **.** | | 66 | | 3. | | 54 | | **.** | | | 88 | | | **.** | | 25 | | 4. | 64 | **.** | 58 | | **.** | | 15 |
| 65 | 32 | | 27 | 77 | | 34 | | 81 | | 55 | | 27 | | | 48 | | 87 | 125 | | 128 |
| 5. | 28 | **.** | x2 | | **.** | | 3x | 6. | | | 12a2 | | | **.** | | | 49 | | **.** | | a4 | | 7. | | 9x2 | | **.** | | | 2y2 | | | 8. | | | | 7xz | **.** | 25b2 | | |  | |
| x3 | 42 | | 5 | 35 | | | a6 | | 14 | | 4y3 | | x | | | 15ab | 28x2 | | |
| 9. | 27x2y3 | | | **.** | | 32ab3 | | |  | | | | | | 10. | | | | | | | | | 4a2b3 | | | | **.** | | | 7x2y8 | | | |  | | | | |
| 8a5b | | | 81x4y6 | | | 21x2y4 | | | | a3b6 | | | |
| 11. | 27x2y3 | | | **.** | | 32ab3 | | |  | | | | | | 12. | | | | | | | | | 4a2b3 | | | | **.** | | | 7x2y8 | | | |  | | | | |
| 8a5b | | | 81x4y6 | | | 21x2y4 | | | | a3b6 | | | |
| 13. | 35x3y | | | **.** | | 26a5b3 | | | **.** | 16xy8 | | 14. | | | | | | | | | | | | 22ab3 | | | | **.** | | | 85x6y7 | | | | **.** | 6a6b5 |
| 39a3b | | | 60x8y6 | | | 28a7b2 | | 51xy2 | | | | 8a4b9 | | | | 55x5y3 |

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| 15. | 2x | 3 | y | 2 | 16. | –x | 3 | –y | 2 |
| –y | 3y | y2 | x3 |

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| 17. | (2x)3 | **.** | | (–9y)3 | | | | |  | |  | | | | | | | | 18. | | | | | | | | | | (26x2)2 | | | **.** | | (9y2)3 | | | | | | | | | | **.** | | | 6a6b5 | | | | |
| (4x)2 | (3y)2 | | | | | (12y)3 | | | (–x)5 | | | | | | | | | | 55x5y3 | | | | |
| 19. | (4x2y)2 | **.** | | (3x2y3)3 | | | | |  | |  | | | | | | | | 20. | | | | | | | | | | (3x3y)2 | | | **.** | | (–22xy2)3 | | | | | | | | | | | |  | | | | | |
| (9xy2)3 | (2x2y)3 | | | | | (2x2y)3 | | | (x2y3)2 | | | | | | | | | | | |
| 21. | (12xy3)3 | | **.** | | (9x3)2 | | | | |  | |  | | | | | | | | | 22. | | | | | | | | | | (6x3y2)3 | | **.** | | (–5xy2)2 | | | | | | | | | | | | |  | | | | | | |
| (18x2y2)3 | | (4xy2)3 | | | | | (10xy4)2 | | (3x2y3)4 | | | | | | | | | | | | |
| 23. | 14x2 – 21x | | | | **.** | 12x – 8 | | | | | | |  | |  | | | | | | | | | 24. | | | | | | 30x3 – 18x2 | | | | | | **.** | | | | 42x + 35 | | | | | | | | |  | | | | | | | | |
| 24x – 16 | | | | 42x – 63 | | | | | | | 6x3 + 5x2 | | | | | | 60x – 36 | | | | | | | | |
| 25. | 6x3 – 30x | | | | **.** | 3x2 + x | | | | | | |  | |  | | | | | | | | | 26. | | | | | | 7x3 + 42x2 | | | | | | **.** | | | | 15x – 30 | | | | | | | | |  | | | | | | | | |
| 6x2 + 2x | | | | 4x2 – 20 | | | | | | | 3x2 – 6x | | | | | | 14x2 + 84x | | | | | | | | |
| 27. | x2 + 3x + 2 | | | | **.** | x3y2 | | | | | | | |  | | |  | | | | | | | | 28. | | | | x2 + x – 2 | | | | | | **.** | | | | x3y | | | | | | | | | | |  | | | | | | |
| x4y | | | | x2 + 4x + 3 | | | | | | | | x2y3 | | | | | | x2 – x – 6 | | | | | | | | | | |
| 29. | x2 – 2x + 1 | | | | **.** | x2y4 | | | | | | | |  | | |  | | | | | | | | 30. | | | | xy5 | | | | | | **.** | | | | x2 + 3x – 4 | | | | | | | | | | | |  | | | | | | | | |
| x4y3 | | | | x2 + 2x – 3 | | | | | | | | x2 + 6x + 8 | | | | | | Xy2 | | | | | | | | | | | |
| 31. | x2 + x – 6 | | | | **.** | x2 – 2x – 3 | | | | | | | |  | | |  | | | | | | | | 32. | | | | x2 + 6x + 9 | | | | | | **.** | | | | x2 + 9x + 20 | | | | | | | | | | | |  | | | | | | | | |
| x2 – 5x + 6 | | | | x2 – 4x – 5 | | | | | | | | x2 + 7x + 12 | | | | | | x2 + 8x + 15 | | | | | | | | | | | |
| 33. | x2 + 4x – 5 | | | | **.** | x2 – 8x + 12 | | | | | | | | | |  | |  | | | | | | | | 34. | | | | | x2 – 3x – 4 | | | | | | **.** | | | | x2 + 5x + 6 | | | | | | | | | | | |  | | | | | | | |
| x2 + 3x – 10 | | | | x2 + 2x + 1 | | | | | | | | | | x2 – 7x + 12 | | | | | | x2 – 3x – 18 | | | | | | | | | | | |
| 35. | x2 – 10x + 21 | | | | | | **.** | x2 – 10x + 16 | | | | | | | | | | | |  | |  | | | | | 36. | | x2 + 7x + 10 | | | | | | **.** | | | | x2 + 9x + 18 | | | | | | | | | | | | | | |  | | | | | |
| x2 – 9x + 14 | | | | | | x2 + 2x – 15 | | | | | | | | | | | | x2 + 8x + 15 | | | | | | x2 + 11x + 18 | | | | | | | | | | | | | | |
| 37. | x2 – 24 + 2x | | | | | | **.** | x2 – 36 + 5x | | | | | | | | | | | | |  | |  | | | | | 38. | | x2 + 20 – 9x | | | | | | | | **.** | | | | | x2 + 42 – 13x | | | | | | | | | | | | |  | | | | | |
| x2 + 16 – 8x | | | | | | x2 + 54 + 15x | | | | | | | | | | | | | x2 + 40 – 13x | | | | | | | | x2 + 28 – 11x | | | | | | | | | | | | |
| 39. | x2 + 3x – 18 | | | | | | **.** | x2 + 2x + 3 | | | | | | | | | | | | |  | |  | | | | | 40. | | x2 – 10x – 24 | | | | | | | | **.** | | | | | x2 – x + 6 | | | | | | | | | | | | |  | | | | | |
| x2 + 2x – 3 | | | | | | x2 + 5x – 6 | | | | | | | | | | | | | x2 + x – 12 | | | | | | | | x2 – 6x – 6 | | | | | | | | | | | | |
| 41. | 2x2 + 17x + 8 | | | | | | **.** | 2x2 + 7x + 6 | | | | | | | | | | | | |  | |  | | | | | 42. | | 3x2 + 13x + 4 | | | | | | | | | | | | **.** | | | 3x2 + 11x + 6 | | | | | | | | | | | | | |  | | | |
| 2x2 + 9x + 9 | | | | | | 4x2 + 9x + 2 | | | | | | | | | | | | | 3x2 + 14x + 8 | | | | | | | | | | | | 4x2 + 13x + 3 | | | | | | | | | | | | | |

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| 43. | | 4x2 + 11x + 6 | | **.** | | | 2x2 – 11x – 6 | | | | | |  | |  | | | | | | | 44. | | | | | | | | | 2x2 – 7x – 4 | | | | **.** | 3x2 – 16x – 12 | | |  |
| 4x2 – x – 3 | | 3x2 – 17x – 6 | | | | | | 3x2 + 20x + 12 | | | | 4x2 – 15x – 8 | | |
| 45. | | 4x2 + 8x + 3 | | **.** | | | 6x2 – 7x + 2 | | | | | |  | |  | | | | | | | 46. | | | | | | | | | 8x2 + 10x + 3 | | | | **.** | 6x2 + x – 1 | | |  |
| 6x2 – x – 2 | | 6x2 + 7x – 3 | | | | | | 4x2 + 4x + 1 | | | | 9x2 + 9x – 4 | | |
| 47. | | 16x2 – 20x + 6 | | | | | | **.** | | 6x3 + 17x2 + 12x | | | | | | | | | |  | | |  | | | | |
| 12x3 + 7x2 – 12x | | | | | | 24x2 – 52x + 20 | | | | | | | | | |
| 48. | | 12x3 + x2 – 6x | | | **.** | | | | 27x2 – 18x – 24 | | | | | | | | | |  | |  | | | | | |
| 18x2 – 36x + 16 | | | 12x3 + 41x2 + 24x | | | | | | | | | |
| 49. | | 7x2 – 36xy + 5y2 | | | **.** | | | | 3x2 + 7xy – 6y2 | | | | | | | | | |  | |  | | | | | |
| 7x2 + 20xy + 3y2 | | | 3x2 – 19xy + 20y2 | | | | | | | | | |
| 50. | | 2x2 – 7xy + 6y2 | | | **.** | | | | x2 – xy – 12y2 | | | | | | | | | |  | |  | | | | | |
| 2x2 – 11xy + 12y2 | | | 2x2 – 9xy + 10y2 | | | | | | | | | |
| 51. | | 6x2 + 7xy – 3y2 | | | **.** | | | | 12x2 + 13xy – 4y2 | | | | | | | | | |  | |  | | | | | |
| 9x2 – 6xy + y2 | | | 6x2 + 5xy – 6y2 | | | | | | | | | |
| 52. | | 24x2 – xy – 3y2 | | | **.** | | | | 9x2 – 36xy + 32y2 | | | | | | | | | |  | |  | | | | | |
| 9x2 – 21xy – 8y2 | | | 24x2 – 41xy + 12y2 | | | | | | | | | |
| 53. | | x2 – 10x + 24 | | | **.** | | | | x2 – 2x – 48 | | | | | | |  | |  | | | | | | |
| 30 + x – x2 | | | x2 – 12x + 32 | | | | | | |
| 54. | | 40 + 3x – x2 | **.** | | | x2 – x – 42 | | | | | | | |  | | |  | | | | | | |
| x2 – 2x – 35 | x2 – 14x + 48 | | | | | | | |
| 55. | | 12x2 – 11x + 2 | **.** | | | 4x2 – 16x + 15 | | | | | | | |  | | |  | | | | | | |
| 8x2 – 14x + 3 | 20 + 7x – 6x2 | | | | | | | |
| 56. | | 12x2 + 17x + 6 | **.** | | | 4x2 – 15x + 19 | | | | | | | |  | | |  | | | | | | |
| 6 + 7x – 3x2 | 6x2 – 13x – 12 | | | | | | | |
| 57. | | x4 –x2 – 12 | **.** | | | x2 + 3x + 2 | | | | | | |  | | | |  | | | | | | | 58. | | | | | x4 – 10x2 + 9 | | | | **.** | x2 – 5x + 6 | | | |  | | |
| x4 + x2 – 2 | x2 + x – 6 | | | | | | | x4 – 7x2 + 12 | | | | x2 + 4x + 3 | | | |
| 59. | (x + y)2 – 5(x + y) + 6 | | | | | | | | | | **.** | 2(x + y)2 + 7(x + y) – 4 | | | | | | | | | | | | | |  | | | | | |  | | | | |
| 2(x + y)2 + 3(x + y) – 2 | | | | | | | | | | (x + y)2 + 2(x + y) – 8 | | | | | | | | | | | | | |
| 60. | (x – y)2 – 16 | | | | | | | | | | **.** | 6(x – y)2 – 7(x – y) – 3 | | | | | | | | | | | | | |  | | | | | |  | | | | |
| 3(x – y)2 – 11(x – y) – 4 | | | | | | | | | | 2(x – y)2 + 5(x – y) – 12 | | | | | | | | | | | | | |
| 61. | x2 + 11x + 30 | | | **.** | | | | x2 + 13x + 42 | | | | | | | | **.** | | x2 + 10x + 16 | | | | | | | | | | | |
| x2 + 12x + 36 | | | x2 + 13x + 40 | | | | | | | | x2 + 2x – 35 | | | | | | | | | | | |

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| 62. | 2x2 + 15x + 18 | **.** | 12x2 – 23x – 24 | **.** | 12x2 – 25x + 12 |
| 12x2 – 41x + 24 | 4x2 + 27x + 18 | 8x2 + 10x – 3 |

Evidencia 24

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.3**

**Efectúe las operaciones indicadas y simplifique:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 1. | 15 |  | 45 |  | | 2. | 51 |  | | 34 | | |  | | | | |
| 26 | 39 | 98 | 343 | | |
| 3. | 56 |  | 63 | **.** | 27 | 4. | 48 | |  | | 84 | **.** | | 9 | |  | |
| 38 | 57 | 16 | 66 | | 77 | 12 | |
| 5. | 22 | **.** | 51 |  | 45 | 6. | 125 | | **.** | | 128 | |  | | 35 | |  |
| 34 | 55 | 81 | 64 | | 100 | | 28 | |

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| 7. | 8 |  | 28 | **.** | 36 | 8. | 20 |  | 27 | **.** | 35 |  |
| 25 | 30 | 42 | 76 | 57 | 18 |

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| 9. | 10x2 |  | | 4x3 | | | |  | | | | 10. | | | 8a3 | | |  | 4a | | |  | | |  | | | | | | |
| 9y | 27y2 | | | | 9b4 | | | 3b5 | | |
| 11. | 17a2b3 | | | |  | | 51a3b | | |  | | | | 12. | | | 14x2y | | | |  | | | 35y3 | | |  | | | |  | |
| 26x2 | | | | 13x4 | | | 9a3 | | | | 18a3 | | |
| 13. | 6a2b3 | | | |  | | 15a4b | | |  | | | | 14. | | | 28a4b9 | | | |  | | | 35a6b9 | | | |  | | |  | |
| 8x2y6 | | | | 12xy3 | | | 22x3y5 | | | | 55xy5 | | | |
| 15. | 4a2b4 | | | |  | | 8a4b9 | | |  | | | | 16. | | | x6y8z9 | | | |  | | | x5y8z7 | | | |  | | |  | |
| 9x4y2 | | | | 27x3y6 | | | a3b2c5 | | | | a4b6c10 | | | |
| 17. | x3y | | **.** | | | a4b3 | | |  | | b2 | | 18. | | | 2xy4 | | | | **.** | | | 27a3b | | |  | | | b2 |
| a2b | | x2y2 | | | y2 | | 3ab3 | | | | 8x2y | | | y2 |
| 19. | 14a2 | |  | | | 4b2 | | | **.** | | b6 | | 20. | | | 32 | | | |  | | | 16a2 | | | **.** | | | a |
| 25b3 | | 10a | | | a3 | | 25a3 | | | | 50a4b | | | b3 |
| 21. | a2x | |  | | | ax3 | | | **.** | | ay2 | | 22. | | | 3ax2 | | | |  | | | a2x | | | **.** | | | bx |
| b2y | | by2 | | | b3x | | b2y3 | | | | b3y2 | | | ay |

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| 23. | a2y4 |  | x3y5 | **.** | a2b4 | 24. | a3x4 |  | a2x2 | **.** | by2 |
| a3b | a5b3 | x4y2 | b3y2 | b4y3 | a4 |

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| 25. | a3b4 |  | a2b3 | **.** | a4b | 26. | xy4 |  | a2b2 | **.** | x2y3 |
| x4y | xy2 | x2y3 | a3b2 | x3y | ab5 |

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| 27. | 3a2b – ab2 |  | 6a2 – 2ab |  | | 28. | x | |  | | x3 | |  | |  | |
| x2 | x4 | 14a3 + 21a2b | | 6a2 + 9ab | |
| 29. | 4x3 |  | x2 |  | | 30. | 64x6 |  | | 4x5 | |  | |  | |
| 3x2 – 3xy | x2 – y2 | 16x2 – 16y2 | 3xy + 3y2 | |
| 31. | x3 + x |  | x3 – x2 |  | | 32. | 3x2 – 12 |  | | x3 – 2x2 | |  | |  | |
| x2 – x | x2 – 2x + 1 | x2 + 4x + 4 | x2 + 2x | |
| 33. | x2 + 9 |  | x2 – 6x – 27 | |  | 34. | x2 – 2x + 3 |  | | x2 + 8x + 16 | | |  | |  | |
| x2 + 2x – 3 | x2 – 10x + 9 | | x2 – 3x + 2 | x2 + 2x – 8 | | |
| 35. | x2 + 2x – 8 |  | x2 – 4x + 4 | |  | 36. | x2 – 7x + 10 |  | | x2 + 5x – 14 | | |  | |  | |
| x2 – 3x – 4 | x2 – 6x + 8 | | x2 – 6x + 5 | x2 + 8x + 7 | | |

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| 37. | x2 – 4x – 12 |  | x2 + 10x + 16 |  | 38. | x2 + 7x – 18 |  | x2 + 11x + 24 |  |  |
| x2 – 7x + 6 | x2 + 7x – 8 | x2 + 6x – 27 | x2 + 5x – 24 |
| 39. | x2 – 3x + 2 |  | x2 + 6x – 16 |  | 40. | x2 – 4x + 3 |  | x2 + 10x + 24 |  |  |
| x2 – 5x + 4 | x2 + x – 20 | x2 – 6x + 9 | x2 + 3x – 18 |

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| 41. | x2 + 4x – 21 |  | x2 + 14x + 48 | | | | | |  | | | 42. | | | | | | | x2 + 5x + 4 | |  | | x2 – 12x + 35 | |  | | |  | |
| x2 + 3x – 28 | x2 + 4x – 32 | | | | | | x2 + 12x + 32 | | x2 + 3x – 40 | |
| 43. | 2x2 + 3x + 1 |  | 2x2 + 13x + 6 | | | | | | |  | | | | 44. | | | | | | 2x2 – 7x + 6 | |  | | 2x2 + 3x – 9 | |  | | |  | |
| 2x2 + 5x + 3 | 2x2 + 11x + 12 | | | | | | | 2x2 – 3x – 2 | | 4x2 + 11x – 3 | |
| 45. | 3x2 – 8x + 4 |  | 3x2 + x – 2 | | | | | | |  | | | | 46. | | | | | | 4x2 – 23x – 6 | |  | | 4x2 + 25x + 6 | | |  | |  | |
| 4x2 – 5x – 6 | 4x2 + 7x + 3 | | | | | | | 3x2 – 14x + 8 | | 2x2 – 11x + 12 | | |
| 47. | 3x2 – 19x + 6 |  | 3x2 + 5x – 2 | | | | | | |  | | | | 48. | | | | | | 6x2 – 5x + 1 | |  | | 4x2 – 8x – 5 | | |  | |  | |
| 2x2 + 7x – 15 | 2x2 + x – 6 | | | | | | | 12x2 – x – 1 | | 8x2 + 6x + 1 | | |
| 49. | 6x2 + 11x + 4 | |  | | 4x2 – 16x – 9 | | | | | |  | | | | | | 50. | | | 6x2 + 13x + 6 | |  | | 6x2 – 23x – 18 | | |  | |  | |
| 6x2 + 23x + 20 | | 4x2 + 4x – 15 | | | | | | 6x2 + 5x – 6 | | 4x2 – 20x + 9 | | |
| 51. | 12x2 + 12x + 3 | |  | | 9x2 – 21x + 6 | | | | | | | |
| 4x2 – 14x – 8 | | 12x2 – 52x + 16 | | | | | | | |
| 52. | x3 – 5x2 – 24x | |  | | x2 + 10x2 + 24x | | | | | | | |
| 4x2 – 12x – 72 | | 2x2 – 4x – 48 | | | | | | | |
| 53. | 2x2 – 9xy + 9y2 | | |  | | 6x2 – 19xy + 15y2 | | | | | | | | | |
| 3x2 – 13xy + 12y2 | | | 3x2 + 14xy – 24y2 | | | | | | | | | |
| 54. | 8x2 – 2xy – 3y2 | | | | | |  | 4x2 + 16xy + 7y2 | | | | | | | | | |
| 12x2 – 59xy + 72y2 | | | | | | 8x2 + 10xy – 63y2 | | | | | | | | | |
| 55. | 10x2 + 9x – y2 | | |  | | x2 – 8x – 20 | | | | | | |
| x2 – 7x – 8 | | | x2 – 10x + 16 | | | | | | |
| 56. | 28+ 13x – 6x2 | | |  | | 10x2 – 39x + 14 | | | | | | | | |
| 16x2 + 24x + 9 | | | 20x2 + 7x – 6 | | | | | | | | |

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| 57. | | 3 + 5x – 42x2 |  | | 84x2 + 32x + 3 | | | | | 58. | | | | | | | 12x2 + 17x + 6 | |  | 6x2 – 5x – 6 |
| 12x2 + 11x – 5 | 24x2 + 34x + 5 | | | | | 12 + 7x – 12x2 | | 6x2 – 17x + 12 |
| 59. | x2 – 3xy + 2x2 | |  | y2 + 2xy – 3x2 | | | | | | |
| x2 – 2xy – 3y2 | | y2 + 4xy + 3x2 | | | | | | |
| 60. | x2 – xy – 12y2 | |  | 4y2 + 7xy – 2x2 | | | | | | | | |
| x2 – 3xy – 18y2 | | x2 – 7xy + 6y2 | | | | | | | | |
| 61. | | x4 + x2 – 2 |  | | x4 – 2x2 – 8 | | | | | 62. | | | | | | | x4 – 8x2 – 9 | |  | x4 – 15x2 – 16 |
| x2 + 2x + 1 | x2 + 3x + 2 | | | | | x2 + 6x + 9 | | x2 – x – 12 |
| 63. | 2(x+ y)2 + (x + y) – 6 | | | | |  | | 3(x+ y)2 – 17(x + y) – 6 | | | | | | |
| (x – y)2 – 2(x + y) – 8 | | | | | 3(x+ y)2 – 11(x + y) – 4 | | | | | | |
| 64. | 2(x– y)2 + 3(x – y) – 9 | | | | | |  | | 9(x– y)2 – 4 | | | | | | |
| 2(x – y)2 + 5(x – y) – 12 | | | | | | 3(x– y)2 + 10(x – y) – 8 | | | | | | |
| 65. | 2x2 – 15x + 18 | | **.** | 6x2 + 31x + 18 | | | | | | | |  | | 2x2 – 13x + 15 | | | |
| 6x2 + 35 + 36 | | 3x2 – 20x + 12 | | | | | | | | 9x2 + 15x + 4 | | | |

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| 66. | 6x2 + 23x + 21 | **.** | 4x2 – x – 14 | |  | | 8x2 + 26x + 21 | |
| 6x2 – 17x + 10 | 3x2 – 2x – 21 | | 8x2 – 23x + 15 | |
| 67. | 12x2 – 35x + 18 |  | | 6x2 – 23x – 18 | | **.** | | 4x2 – 19x + 12 | |
| 2x2 – 17x + 36 | 6x2 – 19x – 36 | | 12x2 – 11x – 36 | |
| 68. | 6x2 – 23x + 21 |  | | 4x2 – 9 | | **.** | | 6x2 + x – 12 | |
| 3x2 + 5x – 12 | 4x2 + 9x – 9 | | 6x2 – 5x – 21 | |
| 69. | 8x2 – 26x + 21 |  | | 4x2 + 25x – 56 | | **.** | | 3x2 + 16x – 12 | |
| 3x2 – 20x + 12 | 3x2 – 11x – 42 | | 6x2 + 5x – 21 | |
| 70. | 9x2 – 4 |  | | 12x2 – 17x + 6 | | **.** | | 4x2 + 13x – 12 | |
| 4x2 + 23x + 28 | 8x2 + 2x – 21 | | 12x2 – 19x – 18 | |

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| 71. | 15x2 – 17x – 42 |  | 27x2 – 15x – 28 | **.** | 10x2 – 3x – 18 |
| 12x2 – 64x + 45 | 14x2 – 75x + 54 | 54x2 – 21x – 20 |

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| 72. | 40x2 + 58x – 21 |  | 48x2 + 80x – 7 | **.** | x2 + 6x – 72 |
| 10x2 – 43x + 12 | 12x2 + 143x – 12 | 18x2 – 65x – 28 |

Evidencia 25

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Expresiones Algebraicas RAP: 1.3**

**Efectúa las operaciones indicadas y simplifique:**

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|  | 2 | + | | 3x + 3 | | | | **.** | | x2 + x – 2 | | | | |
| x + 3 | x2– 2x – 8 | | | | x2 – 1 | | | | |
|  | 3 | – | | 8x – 4 | | | | **.** | | x2 – x – 6 | | | | | | |
| x – 2 | 2x2– 5x – 3 | | | | 2x2 + 3x – 2 | | | | | | |
|  | 3x2 + 3x | | | | **.** | | x2+ 2x –8 | | | | | – | | 2x | | |
| 3x2– 8x +4 | | | | x2+ 5x + 4 | | | | | 2x – 1 | | |
|  | x | + | | 3x +12 | | | |  | | x2 + 8x + 16 | | | | | | |
| 2x – 3 | x2– 4x – 12 | | | | x2 + 16x + 8 | | | | | | |
|  | 1 | + | | 12x2– 4x | | | | |  | | | 3x2 + 8x – 3 | | | | | |
| x – 1 | 4x2– 11x – 3 | | | | | x2 – 9 | | | | | |
|  | 6x2– 12x | |  | | | 2x2– 5x + 2 | | | | | – | | 3 | | |
| 2x2+ 3x – 9 | | 2x2 + 5x – 3 | | | | | x+ 1 | | |

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| 7. | 1– | 1 | **.** | x | 8. | 2 – | 1 | **.** | x2 |
| x | 4x2– 1 | x | 4x2 – 1 |

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| 9. | 3 + | 3 | **.** | x | 10. | 6 + | 2 | **.** | x |
| x | x2– 1 | x | 9x2 – 1 |

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| 11. | 4 – | 10 | **.** | 2x | 12. | 9 – | 6 | **.** | 3x |
| x | 4x2– 25 | x | 9x2 – 4 |

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| 13. | 3 + | 1 | 1 – | 1 | 14. | 5 – | 2 | 1 + | 2 |
| x | 3x + 1 | x | 5x– 2 |

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| 15. | x – | 9 | 1 – | 3 | 16. | x – | 4 | 1 + | 2 |
| x | x + 3 | x | x– 2 |

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| 17. | x – | 1 | x – | x | 18. | 2 – | 9 | x + | 3x |
| x | x + 1 | 2x2 | 2x– 3 |

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| 19. | 3x – | 4 | x – | 2x | 20. | x – | 3 | x – | 1 |
| 3x | 3x + 2 | 4x – 1 | 4x+ 3 |

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| 21. | x – | 24 | x – | 12 | 22. | x – | 1 | x – | 1 |
| x + 2 | x – 4 | 2x – 1 | 2x+ 1 |

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| 23. | x + | 4x | x – 2 – | 4 | 24. | x – | x | x + 4 + | 5 |
| x – 3 | x + 1 | x – 1 | x– 2 |

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| 25. | x – 1 – | 3 | 2x + 5 + | 9 |  |
| x + 1 | x – 2 |

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| 26. | x – 3 – | 7 | 3x – 1 + | 10 |  |
| x + 3 | x + 4 |

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| 27. | 3x – 5 + | 13 | 2x – 1 – | 26 |  |
| 2x + 3 | 3x – 2 |

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| 28. |  | x | – | 4 |  | 1 | + | 1 |  |
| 4 | x |  | x+ 4 | x – 4 |

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| 29. | x – | 1 | 1 – | 1 | 30. | 4 – | 9 |  | 2 | – | 1 |
| x | x2 | x2 | 3x | x2 |

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| 31. | 6 – | 13 | + | 6 | 8 – | 10 | – | 3 |
| x | x2 | x | x2 |

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| 32. | 12 – | 1 | – | 6 | 8 – | 2 | – | 3 |
| x | x2 | x | x2 |

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| 33. | 1 + | 4 | 3 + | 4 |  |
| 2x – 3 | 2x – 5 |

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| 34. | 1 + | 6 | 2 + | 7 |  |
| 3x – 5 | 3x – 5 |

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| 35. | 3 – | 4 | 4 – | 7 |  |
| 3x + 2 | 3x + 2 |

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| 36. | 2 – | 3 | 7 – | 9 |  |
| 2x + 1 | 2x + 1 |

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| 37. | x + | 2 | 1 – | 2 | 38. | x – | 2 | 1– | 2 |  |
| x + 3 | x + 3 | 3x – 1 | 3x – 1 |

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| 39. | x – | 3 | x – | 12 | 40. | x – | 4 | x+ | 2 |  |
| 2x + 5 | x – 1 | 3x + 4 | 3x – 5 |

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| 41. | x – 5 – | 7 | x – 4 – | 14 |  |
| x + 1 | x + 1 |

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| 42. | x – 5 – | 7 | x – 4 – | 14 |  |
| x + 1 | x + 1 |

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| 43. | x – 2 – | 16 | x + 5 – | 4 |  |
| x – 2 | x – 2 |

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| 44. | x + 1 – | 8 | x + 7 + | 16 |  |
| x – 1 | x – 1 |

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| 45. | x – 3 + | 6 | x + 1 – | 6 |  |
| 2x + 1 | 2x + 1 |

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| 46. | 3x – 4 + | 11 | 3x – 10 + | 33 |  |
| 2x + 3 | 2x + 3 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 47. | 3 | – | 1 | 48. | 1 | – | 1 | 49. | 1 | – | 1 |
| 4 | 2 | 2 | 6 | 3 | 21 |
| 1 – | | 2 | 3 | + | 1 | 1 | – | 3 |
| 3 | 20 | 4 | 2 | 7 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 50. | 7 | – | 3 | 51. | 3 | – | 2 | 52. | 5 | – | 35 |
| 8 | 4 | 4 | 3 | 12 | 36 |
| 1 | + | 1 | 19 | – | 5 | 3 | – | 2 |
| 36 | 18 | 18 | 6 | 2 | 3 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 53. | 1 | + | 1 | 54. | 1 | + | 1 | 55. | 4 | – | 1 |
| x | 2 | x | 3 | x2 | 9 |
| 1 | – | 1 | 1 | – | 1 | 2 | – | 1 |
| x2 | 4 | x2 | 9 | x | 3 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 56. | 1 | – | 1 | 57. | 6 – | 1 | + | | 2 | |  | 58. | 12 + | 5 | – | 2 |
| 4x2 | 25 | x | 22 | | x | x2 |
| 1 | – | 1 | 3 + | 1 | – | 2 | |  | | 12 + | 11 | + | 2 |
| 2x | 5 | x | x2 | | x | x2 |

**COMPETENCIA PARTICULAR**

Emplea las funciones y ecuaciones lineales en la solución de problemas que se presentan en situaciones de su entorno académico, personal y social.

**RAP**

3.1 Identifica elementos de las funciones lineales partir de representaciones tabulares, gráficas y algebraicas en su ámbito personal y social.

3.2 Elabora modelos que den lugar a ecuaciones y/o sistemas lineales a partir de situaciones de la vida cotidiana y las ciencias.

3.3 Utiliza modelos en la solución de problemas que dan lugar a ecuaciones y sistemas lineales en situaciones de la vida cotidiana y las ciencias.

Evidencia 1

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: funciones y Ecuaciones Lineales RAP: 1.1**

Trace las gráficas de las rectas representadas por las siguientes ecuaciones:

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
| 1. x + y = 1 | 1. x + y = 3 | 1. x + y = 4 |
| 1. x + 2y = 2 | 1. 3x + y = 3 | 1. x – y = 2 |
| 1. x – y = 5 | 1. x – 2y = 4 | 1. x + 3y = 6 |
| 1. 4x + y = 6 | 1. x – 5y = 10 | 1. 2x – y = 8 |
| 1. 3x + y = 9 | 1. 2x + y = 5 | 1. x + 2y = –3 |
| 1. x – 3y = –4 | 1. 2x – y = –3 | 1. x + y = 0 |
| 1. 3x + y = 0 | 1. x – 2y = 0 | 1. 2x – 3y = 0 |
| 1. x = 3 | 1. 2x = –3 | 1. 2y = –5 |
| 1. y = 4 | 1. 2x – 3y = 6 | 1. 3x + 2y = 12 |
| 1. 4x – 3y = 12 | 1. 3x – 5y = 15 | 1. 3x – 2y = 5 |
| 1. 3x – 4y = 7 | 1. 4x + 7y = 14 | 1. 6x – 5y = 8 |

Evidencia 2

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: funciones y Ecuaciones Lineales RAP: 1.2**

**Resuelve gráficamente los sistemas de ecuaciones siguientes:**

|  |  |  |
| --- | --- | --- |
| 1. x = 1 | 1. x = 2 | 1. y = –1 |
| x + y = 2 | x + 3y = 5 | 3x + y = 2 |
|  |  |  |
| 1. y = –1 | 1. x + y = 3 | 1. x + y = 4 |
| 2x – y = 7 | 2x + y = 4 | x + 2y = 7 |
|  |  |  |
| 1. x – y = 3 | 1. x + 2y = 5 | 1. x – 3y = 4 |
| x + y = 1 | 2x – y = –5 | 2x – 3y = 2 |
|  |  |  |
| 1. x + y = 0 | 1. x – 2y = 0 | 1. 2x + y = 0 |
| 2x + y = 4 | 2x – y = 6 | 3x – 2y = 7 |
|  |  |  |
| 1. x – y = 5 | 1. x – y = 2 | 1. 2x + 3y = 8 |
| 3x + 2y = 5 | 2x – 3y = 1 | 3x – y = 1 |
|  |  |  |
| 1. x – 2y = 3 | 1. 3x + y = 7 | 1. x – 2y = 4 |
| 2x + 3y = –1 | 2x – y = 3 | 3x + y = –2 |
|  |  |  |
| 1. 5x + 4y = 2 | 1. 3x – y = 8 | 1. 4x – 3y = 2 |
| 2x + 3y = 5 | 2x + 5y = 11 | 5x + y = –7 |
|  |  |  |
| 1. 5x + 2y = 2 | 1. x – 2y = 3 | 1. 2x – y = –2 |
| 4x + 3y = –4 | 3x – 4y = 6 | 4x + y = 5 |
|  |  |  |
| 1. x + 2y = 2 | 1. 2x – y = 4 | 1. 2x + 6y = 11 |
| 2x + 4y = 1 | 6x – 3y = 4 | x + 3y = 3 |

Evidencia 3

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: funciones y Ecuaciones Lineales RAP: 1.2**

**Resuelve los siguientes sistemas de ecuaciones por eliminación:**

|  |  |  |
| --- | --- | --- |
| 1. x + y = 2 | 1. 3x – y = 0 | 1. 4x – y = 6 |
| 2x – y = 1 | 2x + y = 5 | 3x + y = 1 |
|  |  |  |
| 1. x + 4y = 5 | 1. x + 2y = 6 | 1. x + 4y = 3 |
| 3x – 4y = –17 | x + 3y = 8 | x – y = –2 |
|  |  |  |
| 1. 3x – y = –1 | 1. 2x + y = 3 | 1. 2x – y = 3 |
| 3x + 2y = –7 | 2x + 3y = 9 | 3x + 2y = 8 |
|  |  |  |
| 1. 2x + y = 4 | 1. x – 2y = –12 | 1. 3x – 2y = 7 |
| 3x – 2y = 27 | 6x + y = 19 | 4x + y = 24 |
|  |  |  |
| 1. x + 3y = –2 | 1. 2x – 3y = 12 | 1. 2x – 7y = –26 |
| 3x + 5y = –6 | 4x + 5y = –20 | 5x + y = 9 |
|  |  |  |
| 1. 7x – 6y = 17 | 1. 5x + 2y = 3 | 1. 2x + 5y = –1 |
| 3x + y = 18 | 7x – 3y = 10 | 3x – 2y = 27 |
|  |  |  |
| 1. 4x + 3y = 6 | 1. 6x – 7y = 10 | 1. 3x + y = 1 |
| 3x – 5y = 19 | 8x – 13y = 6 | x + 2y = 3 |
|  |  |  |
| 1. 3x – y = –1 | 1. 5x + y = –1 | 1. 2x – y = 2 |
| 7x + y = 6 | 11x + 4y = –1 | 6x – 7y = 8 |
|  |  |  |
| 1. x – y = 1 | 1. 2x – 4y = 1 | 1. 4x – 9y = –9 |
| 2x + 3y = –1 | 4x – 2y = 3 | 2x + 6y = 13 |
|  |  |  |
| 1. 3x + 4y = 5 | 1. 15x – 9y = –5 | 1. 4x + 6y = 7 |
| 9x + 4y = 9 | 8x + y = 7 | 3x + 5y = 6 |
|  |  |  |
| 1. x – 2y = 1 | 1. 6x – 3y = 4 | 1. 2x + y = 3 |
| 2x – 4y = 3 | 2x – y = 3 | 8x + 4y = 9 |
|  |  |  |
| 1. 3x + y = 1 | 1. 5x – 5y = 8 | 1. x + 3y = 3 |
| 6x + 2y = 5 | x – y = 7 | 2x + 6y = 13 |
|  |  |  |
| 1. 3x – 2y = 7 | 1. 2x – 3y = 4 | 1. x + 2y = –2 |
| 6x – 4y = 14 | 4x – 6y = 8 | 3x + 6y = –6 |
|  |  |  |
| 1. 3x – y = –1 | 1. y – 3x = 1 | 1. 3y – x = 2 |
| 2y – 6x = 2 | 9x – 3y = –3 | x – 3y = –2 |

Evidencia 4

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: funciones y Ecuaciones Lineales RAP: 1.2**

**Resuelve por el método de sustitución los siguientes sistemas de ecuaciones:**

|  |  |  |
| --- | --- | --- |
| 1. x – y = 0 | 1. x – 2y = 0 | 1. x + 3y = 0 |
| 3x + 2y = 5 | x + 2y = 8 | 2x – y = 7 |
|  |  |  |
| 1. x + 2y = 0 | 1. x – y = 1 | 1. x – 2y = 2 |
| 3x + 2y = 4 | 2x + y = 8 | x + 3y = 7 |
|  |  |  |
| 1. x – 3y = 2 | 1. x – y = –5 | 1. 5x – y = 1 |
| 2y – 5y = 3 | x + 4y = 10 | 3x + y = 7 |
|  |  |  |
| 1. 4x + y = 7 | 1. 5x + y = 8 | 1. 3x + y = –5 |
| 2x – y = –1 | 3x – 2y = 10 | 4x + 3y = 5 |
|  |  |  |
| 1. 4x + y = 10 | 1. 4x – y = 11 | 1. 3x – y = 14 |
| 9x + 7y = 13 | 3x – 5y = 4 | 5x – 7y = 2 |
|  |  |  |
| 1. 2x – y = 5 | 1. 2x – y = 9 | 1. 2x – 3y = 6 |
| 4x – 3y = 7 | 7x + 2y = 4 | 3x – 2y = –1 |
|  |  |  |
| 1. 4x + 3y = 5 | 1. 2x + 5y = 3 | 1. 3x + 4y = 1 |
| 3x + 2y = 3 | 3x + 7y = 5 | 2x + 3y = –1 |
|  |  |  |
| 1. 3x + 2y = 7 | 1. 8x – 7y = 4 | 1. 5x + 6y = 10 |
| 4x + 3y = 8 | 7x – 4y = –5 | 4x + 9y = –13 |
|  |  |  |
| 1. 4x – 5y = 9 | 1. 3x – 4y = –1 | 1. 2x – 3y = 5 |
| 7x – 9y = 15 | 4x – 5y = 1 | 3x + 4y = –18 |
|  |  |  |
| 1. 6x + 5y = 7 | 1. 2x + 3y = 3 | 1. 2x + 6y = 5 |
| 7x + 6y = 9 | x + 5y = 4 | 7x – y = 1 |

Evidencia 5

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: funciones y Ecuaciones Lineales RAP: 1.2**

**Resuelve los siguientes sistemas de ecuaciones:**

|  |  |
| --- | --- |
| 1.- 3x + 2(y – 3) = 2y | 2.- 2(x – 3y) + 3(2y – 4) = 0 |
| 2x – (y + 2x) = 4 | 4(x – 1) – (4x – y) = 3 |

|  |  |
| --- | --- |
| 3.- 3x – 2(y + 7) = 2 | 4.- 4(x + 1) – 3(y + 2) = 19 |
| 4(x + 6) + 7y = 26 | 5x + 4(y – 3) = –9 |

|  |  |
| --- | --- |
| 5.- 2(3x – 4) + 3(2y – 7) = –35 | 6.- 3x –2(2y + 3) = 4 |
| 2x – (3y + x) = 7 | 7(x – y) + 2(x + 4y) = 17 |

|  |  |
| --- | --- |
| 7.- 3(x – 2y) + 2(x + 3) = 4 | 8.- 3(2x + y) = 2(x – 2y) + 26 |
| 4(x + y) – 3(x + 2y) = –2 | 2(x – y) = 3(2x + y) – 22 |

|  |  |
| --- | --- |
| 9.- 5(x – 3y) – 2(2x – 5y) = –21 | 10.- 3(2x + 3y) + 4(3x – y) = –11 |
| 2(2x + y) – (x – y) = 9 | 6(x + y) – (4x + y) = 21 |
| 2(x + 5y) – 3(x – 2y) = 10 | 4(2x + 7y) – (x + y) = 19 |
| 7(x – 4y) + 2(x – 3y) = 20 | 5(3x + 8y) + 2(x + 2y) = 3 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13.- | 5 | x – | 2 | y = 3 |  | 14.- | 5 | x + | 1 | y = 3 |
| 8 | 3 |  | 6 | 2 |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 3 | x – | 4 | y = 2 |  |  | 2 | x – | 3 | y = 7 |
| 4 | 3 |  | 3 | 4 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15.- | 2 | x – | 4 | y = –2 |  | 16.- | 1 | x – | 1 | y = – | 1 |
| 3 | 5 |  | 3 | 4 | 12 |
|  |  |  |  |  |  |  |  |  |  |  | | |
|  | 7 | x + | 1 | y = 13 |  |  | 3 | x + | 5 | y = 4 | | |
| 10 | 6 |  | 4 | 6 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17.- | 2 | x – | 1 | y = | 29 |  | 18.- | 2 | x – | 3 | y = | 1 | |
| 5 | 4 | 20 |  | 3 | 4 | 12 | |
|  |  |  |  |  | |  |  |  |  |  |  | | |
|  | 2 | x + | 2 | y = | 4 |  |  | 4 | x + | 9 | y = | | 37 |
| 7 | 3 | 21 |  | 7 | 8 | 56 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19.- | 3 | x + | 5 | y = | 7 |  | 20.- | 5 | x + | 3 | y = | 31 | |
| 8 | 12 | 3 |  | 6 | 8 | 4 | |
|  |  |  |  |  | |  |  |  |  |  |  | | |
|  | 5 | x – | 7 | y = | 16 |  |  | 2 | x – | 3 | y = | | 43 |
| 6 | 9 | 9 |  | 9 | 4 | 6 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21.- | 3 | x + | 2 | y = | 7 |  | 22.- | 3 | x – | 2 | y = | 7 | |
| 4 | 3 | 24 |  | 8 | 3 | 12 | |
|  |  |  |  |  | |  |  |  |  |  |  | | |
|  | 6 | x – | 4 | y = | 2 |  |  | 3 | x + | 8 | y = | | 5 |
| 7 | 9 | 63 |  | 2 | 9 | 9 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23.- | 2x + 3y | | | – | x | | = | 1 | |  | | 24.- | | x + y | | + | | 3x – y | = | 7 | |
| 3 | | | 4 | | 12 | |  | | 3 | | 2 | 2 | |
|  |  | | |  |  | |  | | |  | |  | |  | |  | |  |  | |
|  | x +y | + | y | | | = – | 1 | |  | |  | | x | | – | | 3x –5y | | = | 1 |
| 5 | 3 | | | 15 | |  | | 3 | | 6 | | 2 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25.- | x + 3y | + | x – y | = | 1 |  | 26.- | 2x – y | – | x – y | = | 1 | |
| 2 | 3 | 6 |  | 3 | 2 | 6 | |
|  |  |  |  |  |  |  |  |  |  |  |
|  | x + y | – | 3x + 4y | = | 1 |  |  | 3x – y | – | x –3y | = | 1 |
| 2 | 6 | 3 |  | 4 | 3 | 12 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27.- | 2y – x | – | 4y + x | = | 1 |  | 28.- | x + y | – | 3x – y | = | 3 | |
| 6 | 2 | 3 |  | 4 | 9 | 4 | |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 2x – 3y | – | 4x + 3y | = | 3 |  |  | 3x – y | – | 4x – y | = 1 | |
| 4 | 3 | 4 |  | 3 | 4 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29.- | x + y | – | 3x + y | = – | 1 |  | 30.- | 3y + x | – | 2y + x | = | 5 | |
| 3 | 8 | 6 |  | 7 | 4 | 28 | |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 5x + y | – | 3x – y | = –1 | |  |  | 3x + 2y | – | x – y | = – | | 1 | |
| 3 | 2 |  | 5 | 6 | 6 | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31.- | 2 | – | 3 | = 0 |  | | | | 32.- | | 2 | | + | | 1 | | = | 1 | |
| x | y |  | | | | x | | y | | 3 | |
|  |  |  |  |  | |  |  | | | | | | | | | | | |  | | |
|  | 3 | + | 4 | = | 17 | | |  | | 1 | | + | | 3 | | = | | | 8 | |
| x | y | 12 | | | x | | y | | 3 | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 33.- | 5 | – | 3 | = | 3 | | | 34.- | | 3 | | + | | 1 | | = | 1 | |
| x | y | 2 | | | x | | y | | 2 | |
|  |  |  |  |  | |  |  | | | | | | | | | | |  | | |
|  | 7 | – | 2 | = | 1 | | |  | 2 | | + | | 1 | | = | | | 1 | |
| x | y | 2 | | | x | | 3y | | 2 | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35.- | 3 | – | 1 | = | 5 | | | 36.- | | 5 | | + | | 4 | | = | 7 | |
| x | y | 4 | | | x | | y | | 6 | |
|  |  |  |  |  | |  |  | | | | | | | | | | |  | | |
|  | 7 | + | 2 | = | 13 | | |  | 7 | | + | | 3 | | = | | | 3 | |
| x | y | 24 | | | 2x | | y | | 4 | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 37.- | 3 | – | 4 | = | 5 | | | 38.- | | 5 | | + | | 3 | | = | 4 | |
| x | y | 4 | | | 3x | | 2y | | 3 | |
|  |  |  |  |  | |  |  | | | | | | | | | | |  | |
|  | 5 | + | 3 | = | 19 | | |  | 9 | | + | | 2 | | = | | | 13 | | |
| 3x | 2y | 12 | | | 2x | | y | | 15 | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 39.- | 1 | | – | | 5 | | = | | | 7 | | | 40.- | | 7 | | + | | 3 | | = | 41 | |
| 3x | | 4y | | 2 | | | 2x | | y | | 6 | |
|  |  |  | |  | |  | | |  | |  | | | | | | | | | | | |  | |
|  | 5 | + | | 8 | | = | | 13 | | | |  | | 4 | | + | | 1 | | = | | | 23 | | |
| 2x | 3y | | 6 | | | | x | | 2y | | 12 | | |

Evidencia 6

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: funciones y Ecuaciones Lineales RAP: 1.3**

1.- El triple de un número supera en 1 a otro, mientras que el quíntuplo del primero es 4 unidades menor que el doble del segundo. Encuentre ambos números.

2.- El doble de un número es 4 unidades menor que otro, mientras que el quíntuplo del primero es 3 unidades menor que el doble del segundo. Halle los dos números.

3.- El triple de un número es 3 unidades menor que el doble de otro, mientras que el séptuplo del primero supera en 5 al cuádruplo del segundo. Obtenga ambos números.

4.- El cuádruplo de un número excede en 6 al triple de otro, mientras que el óctuplo del primero es 22 unidades menor que el séptuplo del segundo. Determina ambos números.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5.- Si | | 1 | de un número se suma a | | | 1 | de otro, resultado es 9. Si se resta | 1 | del |
| 4 | 3 | 2 |
| segundo a los | | | 5 | del primero, el resultado es 1. Encuentre ambos números. | | | | | |
| 6 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6.- La mitad de un número menos | | | 1 | de otro es 2, y | 5 | del primero menos | | 3 | del |
| 3 | 9 | 16 |
| segundo es 11. | Halle los números. | | | | |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7.- La tercera parte de un número supera en 2 a | | | | | 1 | de otro, y | | 2 | del segundo excede |
| 7 | 3 |
| en 2 a | 4 | del primero. | ¿Cuáles son esos números?. | | |
| 5 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8.- Siete octavos de un número es 4 unidades menos que | | | | | 5 | de otro, y | | 3 | del segundo |
| 6 | 5 |
| es 10 más que | 1 | del primero. | Obtenga ambos números. | | |
| 3 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 9.-La suma de los recíprocos de dos números es | | | | 1 | , y la diferencia de dichos recíprocos | |
| 12 |
| en | 1 | Determine ambos números. | | |
| 84 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 10.-La suma de los recíprocos de dos números es | | | | 1 | , y la diferencia de tales recíprocos | |
| 30 |
| en | 1 | Encuentre ambos números. | | |
| 330 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17.-Si se suma 3 tanto al numerador como al denominador de una fracción, su valor | | | | | | | | | |
| resulta ser | | 2 | | . Si se resta 2 al numerador y al denominador, el valor se convierte | |
| 3 | |
| en | | 1 | | . ¿Cuál es la fracción?. | |
| 2 | |
| 18.-Si se resta 1 al numerador y se suma 1 al denominador de una fracción, su valor | | | | | | | | | |
| convierte en | | 1 | | . Si se suma 3 al numerador y se resta 3 al denominador, el valor convierte | |
| 2 | |
| resultante es 2. Encuentre la fracción. | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19.-Si se suma 2 al numerador y 4 al denominador de una fracción, su valor resulta | | | | | | | | |
| ser | | 2 | . Si se resta 2 al numerador y se suma 1 al denominador, el valor de la | | |
| 3 |
| fracción se convierte en | | | 1 | . Halle la fracción. | |
| 2 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 20.-Si se suma 3 al numerador y 5 al denominador de una fracción, su valor resulta | | | | | | | |
| ser | | 4 | . Si se resta 2 al numerador como al denominador, se observa | 5 |
| 5 | 6 |
| Encuentre la fracción. | | | | |

21.-Guillermo invirtió parte de su dinero al 12%y el resto al 15%. El ingreso por ambas inversiones totalizó $3000. Si hubiera intercambiado sus inversiones, el ingreso habría totalizado $2940. ¿Qué cantidad tenía en cada inversión?

22.-Una señora invirtió parte de su dinero al 19%y el resto al 13%. El ingreso por ambas inversiones dio un total de $3690. Si hubiera intercambiado sus inversiones, el ingreso habría sido de $3570 en total. ¿Qué cantidad tenía en cada inversión?

23.-El interés total de dos inversiones de $20,000 y $25,000 fue de $4,900. Si las inversiones se intercambiaran, el interés total sería de $5,000. Determine la tasa de interés en cada inversión.

24.-El interés total de dos inversiones de $4,000 y $6,000 fue de $1,320. Si las inversiones se intercambiaran, el interés total sería de $1,280. Obtenga la tasa de interés en cada inversión.

25.- Si 5 libras de almendras y 4 de nueces cuestan $30.30 dólares, mientras que 8 libras de almendras y 6 de nueces cuestan $47.20 dólares, encuentre el precio por libra de cada producto.

26.- Si 6 libras de naranjas y 5 de manzanas cuestan $4.19 dólares, mientras que 5 libras de naranjas y 7 de manzanas cuestan $4.88 dólares, determine el precio por libra de cada fruta.

27.- Si 10 paquetes de maíz y 7 de chícharos cuestan $12.53, mientras que 7 de maíz y 9 de chícharos cuestan $12.52 dólares, halle el precio por paquete de cada producto.

28.-Si 12 libras de papas y 6 de arroz cuestan $7.32 dólares, mientras que 9 libras de papas y 13 de arroz cuestan $9.23 dólares, ¿Cuál es el precio por libra de cada producto?.

29.- Si una solución de ácido al 20% se agrega a otra al 50%, resulta una mezcla al 38%. Si hubiera 10 galones más de la solución al 50%, la nueva mezcla resultaría al 40% de ácido. ¿Cuántos galones se tienen de cada solución?.

30.- Si una aleación de plata al 8% se combinara con otra al 20%, la mezcla contendría 10.4% de plata. Si hubiera 10 libras menos de la aleación al 8% y 10 más de la aleación al 20%, la mezcla resultaría al 12.8% de plata. ¿Cuántas libras de cada aleación se tienen?.

31.- Un joyero combina oro de 24 y de 8 quilates y obtiene oro de 12. Si tuviera y onzas más de oro de 24 quilates, obtendría oro de 14.4. ¿Cuántas onzas de cada clase tiene?.

32.- Una bolsa contiene $3 dólares en monedas de 5 y 10 centavos. Si las monedas de 10 fueran de 5 y viceversa, el valor total de las monedas sería de $3.30 dólares. ¿Cuántas hay de cada clase en la bolsa?.

33.- Una bolsa contiene $13.80 dólares en monedas de 10 y 25. Si las de 25 fueran de 10 y viceversa, el valor total de las monedas sería de $15.60 dólares. ¿Cuántas hay de cada clase en la bolsa?.

34.-Un hombre remó 8 millas en un río contra corriente durante dos horas, y de regreso hizo una hora. Encuentre la velocidad de la corriente y la del hombre remando en aguas tranquilas.

35.-Un avión demoró 5 horas en recorrer 3,500 millas volando en dirección del viento, mientras que en contra de el, demoró 7 horas. Determine la velocidad del viento y la del avión con el viento en calma.

36.-Un avión voló 640 millas en dirección del viento en una hora y 36 minutos. De regreso, voló contra el viento y demoró 2 horas en realizar el vuelo. Obtenga la velocidad del viento y la del avión con el viento en calma.

37.- Cuando una persona maneja de su casa al trabajo a 60 millas por hora, arriba 4 minutos antes de lo normal, y cuando lo hace a 40 millas por hora, llega 6 minutos después de lo usual. Halle la distancia de la casa a su oficina y la velocidad a la que normalmente conduce.

38.- Hace 5 años la edad de un muchacho es 1/5 de la que tenía su papá, y dentro de 10 años el hijo tendrá la mitad de la edad del papá. Determine las edades actuales.

39.-Hace 30 años la edad de una señora era ½ de la edad de su esposo, y dentro de 15 años ella tendrá 4/5 de la edad de él. Halle las edades actuales.

40.-Un punto de apoyo se sitúa, de tal manera, que dos cargas de 80 y 120 libras quedan en equilibrio. Si se agregan 100 libras a la carga de 80, el punto de apoyo debe recorrerse un pie hacia la carga de 80 libras para preservar el equilibrio. Encuentre la distancia entre las cargas originales.

41.-Un punto de apoyo de una palanca está situado, de tal manera, que dos cargas de 36 y 48 libras colocadas en sus extremos quedan en equilibrio. Si se agregan 28 libras a la carga de 36, el punto de apoyo debe recorrerse un pie hacia la carga de 36 libras para preservar el equilibrio. Obtenga la longitud de la palanca.

42.-Un punto de apoyo está situado, de tal manera, que dos cargas de 60 y 90 libras quedan en equilibrio. Si se agregan 15 libras a la carga de 60, la de 90 debe recorrerse 2 pies más lejos del punto de apoyo para preservar el equilibrio. Halle la distancia original entre las cargas de 60 y 90 libras.

43.-Si la base de un rectángulo aumenta 2 pulgadas y la altura disminuye 2, el área disminuye 16 pulgadas cuadradas. Si la base disminuye 1 pulgada y la altura aumenta 2, el área se incrementa en 20 pulgadas cuadradas. Determine el área original del rectángulo.

44.-Si la longitud de un lote rectangular disminuye 10 pies y la anchura aumenta 10, el área del lote se incrementa en 400 pies cuadrados. Si la longitud crece 10 pies y la anchura disminuye 5, el área del lote permanece constante. Halle el área lote original.

45.-A y B juntos pueden realizar un trabajo en 24 horas. Si A trabaja solo durante 6 horas y luego B completa el trabajo en 36 horas, ¿cuántas horas demorará cada uno en hacer el trabajo solo?.

46.-A y B juntos pueden realizar un trabajo en 36 horas. Si A trabaja solo durante 10 horas y luego B completa el trabajo en 75 horas, ¿cuántas horas demorará cada uno en hacer el trabajo solo?.

47.-A y B juntos pueden realizar un trabajo en 24 horas. Después de que A trabajó solo durante 7 horas y B se unió al trabajo y juntos terminaron el resto en 20 horas, ¿cuánto tiempo demora cada uno en hacer el trabajo solo?.

48.- Un tanque puede ser llenado por dos tuberías abiertas simultáneamente durante en 80 minutos. Si la primera tubería estuvo abierta durante solamente 1 hora y la segunda llenó el resto del tanque en 105 minutos, ¿cuánto tardaría cada tubería en llenar el tanque separadamente?.

49.- Un edificio de oficinas con un área total de piso de 60,000 pies cuadrados está dividido en 3 oficinas A, B, y C. La renta por pie cuadrado de área de piso es de $4 dólares para la oficina A, $3 dólares para la oficina B y $2.50 para la oficina C. La renta de la oficina B es el doble de la C. Si la renta total del edificio es de $192,500, ¿cuál es el valor de cada oficina?.

50.- Un edificio de oficinas con un área total de piso de 8,000 pies cuadrados está dividido en 3 oficinas A, B, y C. La renta por pie cuadrado de área de piso es de $5 dólares para la oficina A, $3 dólares para la oficina B y $2 para la C. La renta de la oficina A es $1,500 más que el cuádruplo de la renta de C. Si la renta total es de $27,900, ¿cuál es el valor de cada oficina?.

**COMPETENCIA PARTICULAR**

Emplea las funciones y ecuaciones cuadráticas en la solución de problemas que se presentan en situaciones de su entorno académico, personal y social.

**RAP**

4.1 Identifica elementos de las funciones cuadráticas partir de representaciones tabulares, gráficas y algebraicas en su ámbito personal y social.

4.2 Elabora modelos que den lugar a ecuaciones cuadráticas a partir de situaciones de la vida cotidiana y las ciencias.

4.3 Utiliza modelos en la solución de problemas que dan lugar a ecuaciones cuadráticas y sistemas cuadrático-lineal en su ámbito académico, personal y social.

Evidencia 1

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Funciones y Ecuaciones Cuadraticas RAP: 1.1 y 1.2**

Resuelve para **x** las siguientes ecuaciones.

|  |  |  |
| --- | --- | --- |
| 1. x2 – x = 0 | 1. x2 – 3x = 0 | 1. x2 + 2x = 0 |
| 1. x2 + 7x = 0 | 1. 4x2 + x = 0 | 1. 5x2 + x = 0 |
| 1. 2x2 – 3x = 0 | 1. 3x2 – 2x = 0 | 1. 3x2 + 6x = 0 |
| 1. 2x2 + 4x = 0 | 1. 10x2 – 15x = 0 | 1. 6x2 – 4x = 0 |
| 1. x2 – 1 = 0 | 1. x2 – 4 = 0 | 1. x2 – 9 = 0 |
| 1. x2 – 36 = 0 | 1. x2 – 2 = 0 | 1. x2 – 12 = 0 |
| 1. 4x2 – 3 = 0 | 1. 9x2 – 2 = 0 | 1. 25x2 – 3 = 0 |
| 1. 16x2 – 7 = 0 | 1. 3x2 – 4 = 0 | 1. 3x2 – 8 = 0 |
| 1. x2 + 2 = 0 | 1. x2 + 3 = 0 | 1. x2 + 9 = 0 |
| 1. x2 + 12 = 0 | 1. x2 + 18 = 0 | 1. 2x2 + 1 = 0 |
| 1. 3x2 + 4 = 0 | 1. 2x2 + 3 = 0 | 1. 3x2 + 16 = 0 |
| 1. 5x2 – a = 0 | 1. 7x2 – b = 0 | 1. x2 – a + b = 0 |
| 1. x2 – (a + b)2 = 0 | 1. x2 – (a + b)2 = 0 | 1. x2 – a2 – b2 = 0 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | x2 – a2 + b2 = 0 |  | (x– 1)2 – | 1 | = 0 |  | (x– 4x)2 – | 2 | = 0 |
| 2 | 3 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | (x + 1)2 – | 3 | = 0 |  | (x– 2)2 – | 5 | = 0 |  | (x+ a)2 – b = 0 |
| 2 | 3 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. (x+ 5a)2 – 9b = 0 | 1. (x– a)2 – 4b = 0 | | 1. (x– 2a)2 – 3b = 0 | |
| 1. x2 + x – 2 = 0 | 1. x2 – 5x + 4 = 0 | | 1. x2 + 7x + 12 = 0 | |
| 1. x2 + 3x = 10 | 1. x2 + 4x = 12 | | 1. x2 – 4x = 21 | |
| 1. x2 – 6x + 8 = 0 | | 1. x2 + 2x – 15 = 0 | |
| 1. x2 – 5x = 36 | | 1. x2 + 10x = 24 | |
| 1. x2 – 9x = –18 | | 1. x2 + 4x + 4 = 0 | |
| 1. x2 + 6x + 9 = 0 | | 1. x2 – 8x + 16 = 0 | |
| 1. x2 – 10x + 25 = 0 | | 1. x2 – 2x + 1 = 0 | |
| 1. x2 – 4x + 4 = 0 | | 1. 3x2 – 3x = 18 | |
| 1. 2x2 – 6x – 8 = 0 | | 1. 4x2 – 4x – 8 = 0 | |
| 1. 3x2 – 12x + 9 = 10 | | 1. 2x2 – 3x – 2 = 0 | |
| 1. 3x2 – 5x = –2 | | 1. 4x2 – 3x = 1 | |
| 1. 4x2 + 4x = 3 | | 1. 3x2 + 8x = 3 | |
| 1. 6x2 + x = 1 | | 1. 6x2 – 35x = 6 | |
| 1. 4x2 + 4x = 15 | | 1. 6x2 = 6 + 5x | |
| 1. 3x2 = 12 – 5x | | 1. 6x2 = 12 – x | |
| 1. 9x2 + 4 = 12x | | 1. 4x2 – 4x + 1 = 0 | |
| 1. 4x2 – 12x + 9 = 0 | | 1. 9x2 – 6x + 1 = 0 | |
| 1. 2x2 + 6ax + 8a2 = 0 | | 1. x2 – ax – 12a2 = 0 | |
| 1. x2 + 2ax – 3a2 = 0 | | 1. x2 – 9ax + 18a2 = 0 | |
| 1. 2x2 – ax – 6a2 = 0 | | 1. 2x2 – 7ax – 4a2 = 0 | |
| 1. 6x2 – 11ax + 3a2 = 0 | | 1. 6x2 – 19ax + 3a2 = 0 | |
| 1. x2 + ax + bx+ ab = 0 | | 1. x2 + ax – bx– ab = 0 | |
| 1. x2 – ax – bx– ab = 0 | | 1. x2 – ax – 4bx+ 4ab = 0 | |
| 1. x2 – 2ax + 3bx– 6ab = 0 | | 1. x2 = a2 + 2ab+ b2 | |
| 1. x2 = a2 – 4ab+ 4b2 | | 1. x2 = 4a2 + 4ab+ b | |
| 1. x2 = 9a2 – 6ab+ b | | 1. x2 + 2ax + a2 = b2 | |
| 1. x2 – 2ax + a2 = b2 | | 1. x2 + 2ax + a2 = 4b2 | |

Evidencia 2

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Funciones y Ecuaciones Cuadraticas RAP: 1.1 y 1.2**

**EJERCICIOS 11.3**

Encuentre el término que debe sumarse a cada una de las siguientes expresiones para obtener un trinomio cuadrado perfecto y exprese éste en forma factorizada.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1.- x2+ 6x | 2.- x2+ 10x | 3.- x2– 30x | | | |
| 4.- x2– 12x | 5.- x2+ x | 6.- x2+ 3x | | | |
| 7.- x2– 9x | 8.- x2– 13x | 9.- x2+ | 2 | x |
| 3 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10.- x2+ | 2 | x | 11.- x2– | 4 | x | 12.- x2– | 4 | x |
| 7 | 5 | 9 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13.- x2+ | 1 | x | 14.- x2+ | 1 | x | 15.- x2+ | 3 | x |
| 2 | 6 | 4 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16.- x2– | 5 | x | 17.- x2– | 7 | x | 18.- x2– | 9 | x |
| 2 | 3 | 5 |

**Evidencia 3**

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Funciones y Ecuaciones Cuadraticas RAP: 1.1 y 1.2**

Resuelve para **x** las siguientes ecuaciones completando el cuadrado.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 19.- x2+ 2x – 3 = 0 | 20.- x2+ 7x + 6 = 0 | | 21.- x2– 3x – 10 = 0 | |
| 22.- x2– x – 12 = 0 | 23.- x2– 7x – 30 = 0 | | 24.- x2– 3x – 18 = 0 | |
| 25.- x2+ 14 = 15x | 26.- x2+ 4x = 21 | | 27.- x2+ 14x = – 24 | |
| 28.- x2= x+ 72 | 29.- x2 + 4x = –4 | | 30.- x2= 6x – 9 | |
| 31.- x2+ 3x + 5 = 0 | 32.- x2+ 3 = 2x | | 33.- x2+ 7 = 5x | |
| 34.- x2+ 8 = –4x | 35.- x2+ x = 0 | | 36.- 2x2– 3x = 0 | |
| 37.- 3x2+ 5x = 0 | 38.- 2x2= 7x | | 39.- 2x2+ 3x +1 = 0 | |
| 40.- 2x2= 1 + x | 41.- 2x2+ 5x = –2 | | 42.- 4x2+ 1 = 5x | |
| 43.- 3x2= 32 + 20x | 44.- 3x2+ 8 = 14x | | 45.- 5x2+ 13 + 6 = 0 | |
| 46.- 4x2 + 24 = 35x | 47.- 4x2= –3 – 8x | | 48.- 9x2= 2 + 3x | |
| 49.- 4x2 + 9 + 12x = 0 | 50.- x2– 1 + 2x = 0 | | 51.- x2 + 3x – 2 = 0 | |
| 52.- 2x2– 6x + 3 = 0 | 53.- 4x2+ 20x = –25 | | 54.- 24x + 16 = 0 | |
| 55.- 3x2– 2x– 2= 0 | 56.- 3x2 = 1 + 5x | | 57.- 5x2 + 3 = 10x | |
| 58.- 2x2– 7x+ 4= 0 | 59.- 3x2+ 8x+ 3= 0 | | 60.- 6x2– 9x + 2 = 0 | |
| 61.- 2x2– 3x– 4= 0 | 62.- 2x2 = 5x – 1 | | 63.- x2– 6x + 10 = 0 | |
| 64.- x2+ 3x+ 11= 0 | 65.- 2x2 = 3x 1 – 4 | | 66.- 3x2– 5x + 3 = 0 | |
| 67.- x2+ ax– 3a2 = 0 | | 68.- x2– ax– 4a2 = 0 | |
| 69.- x2+ 3ax+ a2 = 0 | | 70.- x2 + 7ax + 3a2 = 0 | |
| 71.- x2– 3ax– 5a2 = 0 | | 72.- x2– 3ax– 2a2 = 0 | |
| 73.- 2x2– ax– 4a2 = 0 | | 74.- 2x2 + 3ax– a2 = 0 | |
| 75.- 2x2+ 5ax + a2 = 0 | | 76.- 3x2 +ax– 3a2 = 0 | |
| 77.- 3x2+ 7ax + 3a2 = 0 | | 78.- 2x2 +ax– 2a2 = 0 | |
| 79.- 2x2– ax + a2 = 0 | | 80.- 2x2 +ax + 4a2 = 0 | |
| 81.- 3x2+ 2ax+ 2a2 = 0 | | 82.- 3x2– 4ax + 2a2 = 0 | |

Evidencia 4

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Funciones y Ecuaciones Cuadraticas RAP: 1.1 y 1.2**

Resuelve las siguientes ecuaciones mediante la fórmula cuadrática.

|  |  |  |  |
| --- | --- | --- | --- |
| 1. x2+ 2x = 0 | 1. x2– 3x = 0 | 1. 3x2– 5x = 0 | |
| 1. 8x2+ 3x = 0 | 1. 6x2+ x = 0 | 1. 4x2– 3x = 0 | |
| 1. x2– 4 = 0 | 1. x2– 36 = 0 | 1. x2– 2 = 0 | |
| 1. x2– 8 = 0 | 1. x2+ 3 = 0 | 1. x2+ 9 = 0 | |
| 1. 4x2– 1 = 0 | 1. 9x2– 25 = 0 | 1. 2x2– 3 = 0 | |
| 1. 3x2– 1 = 0 | 1. 5x2– 6 = 0 | 1. 3x2– 7 = 0 | |
| 1. 2x2– 9 = 0 | 1. 4x2+ 9 = 0 | 1. 5x2+ 3 = 0 | |
| 1. x2– 8x + 7 = 0 | 1. x2+ 3 – 4 = 0 | 1. x2– 5x – 24 = 0 | |
| 1. x2+ 7x + 12 = 0 | 1. x2– x – 6 = 0 | 1. x2– 9x + 20 = 0 |
| 1. x2+ 6x – 16 = 0 | 1. x2– 2x – 8 = 0 | 1. x2– 4x = 32 | |
| 1. x2– 3x = 18 | 1. x2– 2x = 2 | 1. x2+ 2x = 4 | |
| 1. x2– 4 = 4x | 1. x2= 2 – 3x | 1. x2 = 4x – 4 | |
| 1. x2+ 6x + 9 = 0 | 1. x2+ 36 = –12x | 1. x2– x + 1 = 0 | |
| 1. x2+ 2x + 2 = 0 | 1. x2– 3x + 4 = 0 | 1. x2– 2x + 5 = 0 | |
| 1. x2+ 2x + 3 = 0 | 1. x2– x + 7 = 0 | 1. 6x2+ 10 = 19x | |
| 1. 18x2– 27x + 4 = 0 | 1. 6x2+ x – 2 = 0 | 1. 8x2 = 14x + 15 | |
| 1. 9x2= 3x + 20 | 1. 2x2= 17x – 36 | 1. 12x2+ 9 = 31x | |
| 1. 10x2+ 9x – 9 = 0 | 1. 24x2+ 21 = 65x | 1. 8x2 = 30x + 27 | |
| 1. 3x2+ 10x + 6 = 0 | 1. 2x2– 4x – 3 = 0 | 1. 3x2+ 6x – 2 = 0 | |
| 1. 5x2– 9 + 3x = 0 | 1. 9x2+ 1 – 6x = 0 | 1. 4x2+ 9 + 12x = 0 | |
| 1. 2x2– 5x + 6 = 0 | 1. 2x2– x + 1 = 0 | 1. 3x2– 2x + 2 = 0 | |
| 1. 4x2+ 2x + 1 = 0 | 1. 5x2+ 6x + 3 = 0 | 1. x2+  = 5 | |
| 1. x2+  = 4 | 1. x2–  = 2 | 1. x2–  = 5 | |

|  |  |
| --- | --- |
| 1. x2– 2 = 1 | 1. x2+ 3 = 8 |
| 1. x2– 5 = –8 | 1. x2– 6 = –1 |
| 1. 2x2+  = 8 | 1. 3x2– 4 + 1 = 0 |
| 1. 32 + 7x + = 4 | 1. 2 + 5x – 2= 0 |
| 1. 2 – 3x – 2= 0 | 1. 2 + 4x – 2= 0 |

Evidencia 5

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Funciones y Ecuaciones Cuadraticas RAP: 1.1 y 1.2**

**Resuelve los siguientes problemas de aplicación de ecuaciones de segundo grado.**

1.- El producto de dos números naturales consecutivos supera en 2 al séxtuplo del siguiente número consecutivo. Encuentra los dos primeros números.

2.- El producto de dos números pares consecutivos en 10 unidades menor que 13 veces el siguiente número par. Halle los dos números.

3.- La suma de dos números es 21 y de sus cuadrados es 225. Obtenga los dos números.

4.- La suma de dos números es 25 y la de sus cuadrados es 317. Encuentre los números.

5.- La diferencia de dos números naturales es 8 y la suma de sus cuadrados es 194. Halle los números.

6.- La diferencia de dos números es 9 y la suma de sus cuadrados es 305. Obtenga los números.

7.- La suma de dos números naturales es 17. La diferencia de sus cuadrados supera en 19 al producto de los números. Determine dichos números.

8.- La suma de dos números es 28 y la de sus cuadrados es 16 menos que el tiple del producto de los números. Halle los números.

|  |  |  |  |
| --- | --- | --- | --- |
| 9.- | La suma de dos números es 14 y la de sus recíprocos es | 7 | . Obtenga los números. |
| 14 |

|  |  |  |
| --- | --- | --- |
| 10.- | La diferencia de dos números naturales es 4 y la suma de sus recíprocos es | 4 |
| 15 |
|  | Encuentre los números |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 11.- | La diferencia de dos números naturales es 6 y la de sus recíprocos es | 1 | . Halle los | |
| 36 |
|  | números |  |  |

12.-Una excursión geológica costo $120 dólares. Si hubiera ido 3 estudiantes más, el costo por estudiantes habrían sido de $2 menos. ¿Cuántos estudiantes fueron a la excursión?.

13.- Una excursión a esquiar costo $300 dólares. Si hubieran sido 3 miembros menos en el club, el costo por persona habría sido de $5 más. ¿Cuántos miembros hay en el club?.

14.- Un hombre pintó una casa por $800 dólares. El trabajo le llevó 20 horas menos de lo que se suponía y entonces gano $2 más por hora de lo previsto. ¿En Cuanto tiempo se suponía que pintaría la casa?.

15.- Una persona realizó un trabajo por $900 dólares. Empleó 3 horas más de los que se suponía y entonces ganó $55 menos por hora de lo que esperaba. ¿En cuanto tiempo se suponía que llevaría a cabo el trabajo?.

16.- La base de un rectángulo mide 4 pies más que su altura y el área es de 192 pies cuadrados. Encuentre las dimensiones del rectángulo.

17.- La base de un rectángulo mide 3 pies más que el doble de su altura y el área es de 189 pies cuadrados. Halle las dimensiones del rectángulo.

18.-Un hombre desea construir una caja metálica abierta. La caja debe tener una base cuadrada, los lados de 9 pulgadas de altura y una capacidad de 5,184 pulgadas cúbicas. Determine el tamaño de la pieza cuadrada de metal que debe comprar para construir la caja.

19.- Si cada uno de dos lados opuestos de un cuadrado se duplica y cada uno de los otros lados opuestos se disminuye 2 pies, el área del rectángulo resultante supera en 32 pies cuadrados al área del cuadrado original. Encuentre la longitud del lado del cuadrado.

20.-Si cada uno de los lados opuestos de un cuadrado se incrementa 5 pulgadas más que el doble del lado del cuadrado, y cada una de los otros lados opuestos se disminuye en 7 pulgadas, el área del rectángulo resultante supera en 55 pulgadas cuadradas al área del cuadrado inicial. Halle la longitud del lado del cuadrado.

21.-Un equipo de remeros puede recorrer 12 millas río abajo y regresar en un total de 5 horas. Si la velocidad de la corriente es de 1 millas por hora, encuentre la velocidad a la que puede remar el equipo en aguas tranquilas.

22.-Un equipo de remeros puede viajar 18 millas río abajo y regresar en un total de 9 horas. Si la velocidad de la corriente es de 1½ millas por hora, halle la velocidad a la que puede remar el equipo en aguas tranquilas.

23.-Un avión vuela entre dos ciudades separadas 300 millas. Cuando el viento sopla a favor a 30 millas por hora, el avión alcanza su destino ½ hora antes. ¿Cuál es la velocidad del avión?.

24.-Un avión vuela entre dos ciudades separadas 3,200 millas. Cuando el viento sopla en contra a 40 millas por hora, el avión alcanza su destino 20 minutos más tarde. ¿Cuál es la velocidad del avión?.

25.-Paulina vive a 30 millas de su oficina. Si maneja su automóvil a 5 millar por hora más de lo usual, llega a su oficina 5 minutos más temprano. ¿A que velocidad manejó normalmente?

26.-Incrementado la velocidad de un automóvil es 3 millas por hora, fue posible realizar un viaje de 360 millas en ½ hora menos de tiempo. ¿Cuál era la velocidad original?.

27.-Un muchacho desea cortar el césped de un prado rectangular de 60 por 45 yardas en dos períodos iguales de tiempo. Determine la anchura de la franja que debe cortar alrededor del prado en el primer período.

28.- La base de un triángulo mide 4 pies menos que la altura. El área es de 48 pies cuadrados. Encuentre la base y la altura del triángulo.

29.-La altura de un triángulo mide 2 pies menos que el doble de la base. El área es de 56 pies cuadrados. Halle la base y la altura del triángulo.

30.-El porcentaje de utilidad de un traje fue igual al precio de costo en dólares. Si el traje se vendió a $144, ¿Cuál fue el precio de costo del traje?.

31.-A demora de 5 horas más en realizar un trabajo de lo que demora B. Si A y B trabajando juntos pueden efectuarlo en 6 horas, ¿Cuánto tarda cada uno en hacerlo sólo?.

32.-A demora de 7 horas más en realizar un trabajo de lo que demora B. Si A y B trabajando juntos pueden efectuarlo en 12 horas, ¿Cuánto tarda cada uno en hacerlo sólo?.

33.-A demora de 11 horas menos del doble del tiempo que tarda B en realizar un mismo trabajo. Si A y B trabajando juntos pueden terminarlo en 28 horas, ¿Cuánto tarda cada uno en hacerlo sólo?.

34.-A demora de 14 horas menos del doble del tiempo que empela B en realizar un mismo trabajo. Si A y B trabajando juntos pueden terminarlo en 45 horas, ¿Cuánto tarda cada uno en hacerlo sólo?.

Evidencia 4

Nombre: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grupo: \_\_\_\_\_ Fecha: \_\_\_\_\_\_\_\_\_

**Tema: Funciones y Ecuaciones Cuadraticas RAP: 1.1 y 1.2**