

# **UNIDAD Nº 2: ÁLGEBRA** **Guía Nº 8 de Matemática: Factores y Productos**

|                                                                                                         |                                       |
|---------------------------------------------------------------------------------------------------------|---------------------------------------|
| <b>Nombre:</b>                                                                                          | <b>Fecha:</b> 22 de Junio al 26 Junio |
| <b>Profesor(a):</b> Elizabeth Coloma                                                                    | <b>Nivel:</b> 1º Medio                |
| <b>Objetivos:</b> Ejercitar los productos notables en forma algebraica y pictórica.                     |                                       |
| <b>Instrucciones:</b> Realiza las actividades en el cuaderno en forma ordenada y clara o imprimir guía. |                                       |

I.- Completa los espacios en blanco para el producto de dos binomios con un término en común

|                                                                                                                              |                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 1. $(x+5)(\underline{\hspace{1cm}}+2) = \underline{\hspace{1cm}} + 7x + \underline{\hspace{1cm}}$                            | 2. $(x+ \underline{\hspace{1cm}})(x + \underline{\hspace{1cm}}) = \underline{\hspace{1cm}} + 8x + 15$                         |
| 3. $(\underline{\hspace{1cm}}+\underline{\hspace{1cm}})(\underline{\hspace{1cm}}+\underline{\hspace{1cm}}) = x^2 + 11x + 24$ | 4. $(x - \underline{\hspace{1cm}})(x + 9) = \underline{\hspace{1cm}} - 2x - 99$                                               |
| 5. $(x- 7)(x - \underline{\hspace{1cm}}) = \underline{\hspace{1cm}} - 12x + \underline{\hspace{1cm}}$                        | 6. $(\underline{\hspace{1cm}}-\underline{\hspace{1cm}})(\underline{\hspace{1cm}}-\underline{\hspace{1cm}}) = m^2 - 11m + 30$  |
| 7. $(x+\underline{\hspace{1cm}})(\underline{\hspace{1cm}}+\underline{\hspace{1cm}}) = x^2 + 15x + 54$                        | 8. $(\underline{\hspace{1cm}}+\underline{\hspace{1cm}})(\underline{\hspace{1cm}}-\underline{\hspace{1cm}}) = x^2 + x - 72$    |
| 9. $(\underline{\hspace{1cm}}-\underline{\hspace{1cm}})(\underline{\hspace{1cm}}+\underline{\hspace{1cm}}) = x^2 - 10x - 75$ | 10. $(\underline{\hspace{1cm}}+\underline{\hspace{1cm}})(\underline{\hspace{1cm}}+\underline{\hspace{1cm}}) = x^2 + 17x + 60$ |

II.- Complete los siguientes espacios que faltan en el cuadrado de binomio

|                                                                                                       |                                                                                                             |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1. $(x + \underline{\hspace{1cm}})^2 = \underline{\hspace{1cm}} + 4xy + \underline{\hspace{1cm}}$     | 2. $(6 - \underline{\hspace{1cm}})^2 = \underline{\hspace{1cm}} - 12x + x^2$                                |
| 3. $(\underline{\hspace{1cm}} - \underline{\hspace{1cm}})^2 = 9x^2 - \underline{\hspace{1cm}} + 16$   | 4. $(\underline{\hspace{1cm}} + 5x)^2 = \underline{\hspace{1cm}} + 40x + \underline{\hspace{1cm}}$          |
| 5. $(6x-7)^2 = \underline{\hspace{1cm}} - \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$        | 6. $(\underline{\hspace{1cm}} - \underline{\hspace{1cm}})^2 = \underline{\hspace{1cm}} - 30x^2 + 9$         |
| 7. $(\underline{\hspace{1cm}} + \underline{\hspace{1cm}})^2 = x^4 - 16x^2 + \underline{\hspace{1cm}}$ | 8. $(\underline{\hspace{1cm}} - \underline{\hspace{1cm}})^2 = \underline{\hspace{1cm}} - 42m^6n^4 + 49 n^8$ |

III.- Completa los espacios que faltan para que sean una suma por su diferencia:

|                                                                                                                                   |                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. $25 - \underline{\hspace{1cm}} = (\underline{\hspace{1cm}} + 7y)(\underline{\hspace{1cm}} - 7y)$                               | 2. $\underline{\hspace{1cm}} - 49m = (2n + \underline{\hspace{1cm}})(2n - \underline{\hspace{1cm}})$                                              |
| 3. $36x^2 - 121 = (\underline{\hspace{1cm}} - \underline{\hspace{1cm}})(\underline{\hspace{1cm}} + \underline{\hspace{1cm}})$     | 4. $64 - \underline{\hspace{1cm}} = (\underline{\hspace{1cm}} + 3y)(\underline{\hspace{1cm}} - 3y)$                                               |
| 5. $\underline{\hspace{1cm}} - a^2b^4 = (m + \underline{\hspace{1cm}})(m - \underline{\hspace{1cm}})$                             | 6. $81a^2 - 25b^6 = (\underline{\hspace{1cm}}-\underline{\hspace{1cm}})(\underline{\hspace{1cm}}+\underline{\hspace{1cm}})$                       |
| 7. $100- 169x^8 = (\underline{\hspace{1cm}}-\underline{\hspace{1cm}})(\underline{\hspace{1cm}}+\underline{\hspace{1cm}})$         | 8. $25x^2-\underline{\hspace{1cm}} = (\underline{\hspace{1cm}}+ 8y)(\underline{\hspace{1cm}}-\underline{\hspace{1cm}})$                           |
| 9. $\frac{4}{9}x^2 - 16 = (\underline{\hspace{1cm}}+\underline{\hspace{1cm}})(\underline{\hspace{1cm}}-\underline{\hspace{1cm}})$ | 10. $\frac{9}{16}x^2 - \frac{81}{25}y^6 = (\underline{\hspace{1cm}}+\underline{\hspace{1cm}})(\underline{\hspace{1cm}}-\underline{\hspace{1cm}})$ |

IV.- Completar el término que falta en los siguientes productos notables:

- 1)  $(x + 3)^2 = x^2 + \text{_____} + 9$

3)  $(x - 7)^2 = \text{_____} - \text{_____} + 49$

5)  $(\text{_____} - 8)^2 = x^2 - \text{_____} + \text{_____}$

7)  $(x + 12)(x - 12) = x^2 - \text{_____}$

9)  $(x + \text{_____})(x - \text{_____}) = \text{_____} - 225$

11)  $(x+7)(x-4) = x^2 + \text{_____} -28$

13)  $(x+5)(x+12) = \text{_____} + \text{_____} + 60$
- 2)  $(x- 5)^2 = \text{_____} -10x + 25$

4)  $(x + 9)^2 = x^2 - \text{_____} + \text{_____}$

6)  $(x - \text{_____})^2 = \text{_____} -14x + \text{_____}$

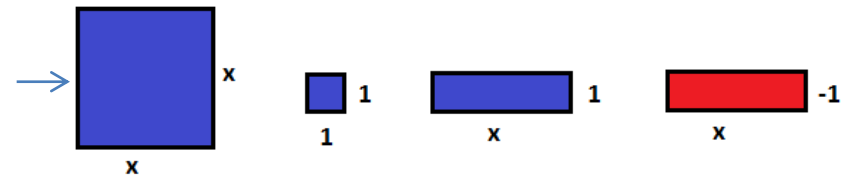
8)  $(x - \text{_____})(x +13) = x^2 - \text{_____}$

10)  $(x - 25)(x + 25)= x^2 - \text{_____}$

12)  $(x -5)(x - 8) = \text{_____} -13x + \text{_____}$

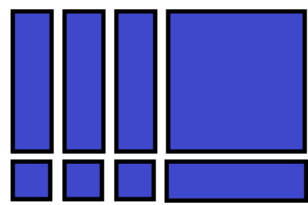
14)  $(x - 9)(x -7) = x^2 - \text{_____} + \text{_____}$

V.- Usando las siguiente información

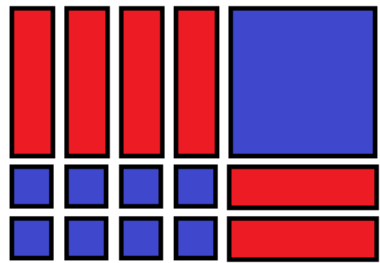


Calcular el área de las siguientes figuras:

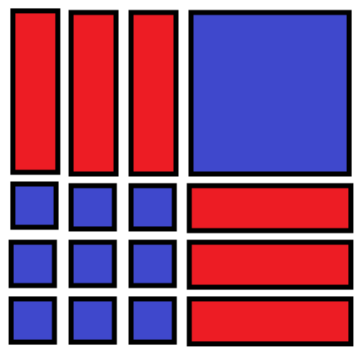
1)



2)



3)



“Perdonaré que no acierten, pero no que no se esfuercen”. Pep Guardiola

