

PRODUCTOS NOTABLES

FACTORIZACIÓN DE UN TRINOMIO

Introducción:

$$\text{Factorice: } d^2 - 3d - 28$$

Respuesta:

Hay que determinar cuales son los dos números que sumados dan -3 y multiplicados dan -28 .

Estos son -7 y 4 :

$$\begin{aligned}d^2 - 3d - 28 &= d^2 + (-7 + 4)d + (-7 \times 4) \\ &= (d - 7)(d + 4)\end{aligned}$$

Ejemplos:

1. $a^2 + 5a + 6 = a^2 + (2 + 3)a + 2 \times 3 = (a + 2)(a + 3)$
2. $b^2 - 5b + 6 = b^2 + (-2 - 3)b + (-2) \times (-3) = (b - 2)(b - 3)$
3. $c^2 + c - 6 = c^2 + (3 - 2)c + 3 \times (-2) = (c + 3)(c - 2)$
4. $d^2 - d - 6 = d^2 + (2 - 3)d + 2 \times (-3) = (d + 2)(d - 3)$
5. $k^2 + 7k + 6 = k^2 + (6 + 1)k + 6 \times 1 = (k + 6)(k + 1)$
6. $m^2 + 5m - 6 = m^2 + (6 - 1)m + 6 \times (-1) = (m + 6)(m - 1)$
7. $n^2 - 5n - 6 = n^2 + (1 - 6)n + 1 \times (-6) = (n + 1)(n - 6)$
8. $p^2 + 5p - 24 = p^2 + (8 - 3)p + 8 \times (-3) = (p + 8)(p - 3)$
9. $q^2 - 5q - 36 = q^2 + (4 - 9)q + 4 \times (-9) = (q + 4)(q - 9)$
10. $r^2 - 15r + 36 = r^2 + (-12 - 3)r + (-12) \times (-3) = (r - 12)(r - 3)$
11. $s^2 + 18s + 81 = s^2 + (9 + 9)s + 9 \times 9 = (s + 9)^2$
12. $t^2 - 14t + 49 = t^2 + (-7 - 7)t + (-7) \times (-7) = (t - 7)^2$

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