

EXAMEN DE MATEMATICAS 2º ESO. ENTIEROS.

1. 630 y 700

$$\begin{array}{r|l} 630 & 2 \\ 315 & 3 \\ 105 & 3 \\ 35 & 5 \\ 7 & 7 \\ 1 & \end{array}$$

$$630 = 2 \cdot 3^2 \cdot 5 \cdot 7$$

$$\begin{array}{r|l} 700 & 2 \\ 350 & 2 \\ 175 & 5 \\ 35 & 5 \\ 7 & 7 \\ 1 & \end{array}$$

$$700 = 2^2 \cdot 5^2 \cdot 7$$

b) $mcd(630, 700) = 2 \cdot 5 \cdot 7 = 70$ U.S.

c) $mcm(630, 700) = 2^2 \cdot 3^2 \cdot 5^2 \cdot 7 = 6300$ U.S.

2. $-12 < -10 < -6 < -3 < -1 < 0 < +1 < +3 < +5 < +6$

3. 125 tomate } a)
175 pimiento } $mcd(125, 175) = 5^2 = 25 \Rightarrow$ De 25 en 25 botes

$$125 = 5^3, \quad 175 = 5^2 \cdot 7$$

$$125 + 175 = 300; \quad 300 : 25 = \underline{\underline{12 \text{ CAJAS}}}$$

b) 25 botes en cada caja

4. $|-71| = 7, \quad |4601| = 60; \quad |-31| = 3, \quad |01| = 0$

5.

a) $6 - 2 - 9 + 13 - 4 - 15 = +19 - 30 = \underline{\underline{-11}}$

b) $(-12 + 12 - 11) - 2 - (3 + 7 - 17) = (+13) - 2 - (-7) = +13 - 2 + 7 = +20 - 2 = \underline{\underline{+18}}$

c) $(-30) : (-5) \cdot (+12) = (+6) \cdot (+12) = \underline{\underline{+72}}$

d) $(+686) : (-2) : (-7) \cdot (-2) = (-343) : (-7) \cdot (-2) = (+49) \cdot (-2) = \underline{\underline{-98}}$

6. a) $(8-5) \cdot (2-1) + 3 - 4 : (-8+6) = 3 \cdot 1 + 3 - 4 : (-2) = 3 + 3 + 2 = \underline{\underline{8}}$

b) $7 - \sqrt{4} \cdot 3 + 2^2 - 1^5 + \sqrt{49} \cdot (4^2 - 3 \cdot 4) = 7 - 2 \cdot 3 + 4 - 1 + 7 \cdot (16 - 12) = 7 - 6 + 4 - 1 + 28 = \underline{\underline{+32}}$

7. $(-25)^0 = 1$ $(-15)^2 = +225$ $(-5)^3 = -125$ $-30^2 = -900$ $-3^5 = -243$

$(-1)^3 = -1$ $(-10)^5 = -100\,000$ 0.5 8. a) $\sqrt[3]{-1} = -1$; b) $\sqrt[4]{-625}$ ~~#~~
 c) $\sqrt[3]{64} = 4$ d) $\sqrt[4]{10000} = 10$

9. a)
$$\frac{(-5)^4 [(-5)^3]^3}{[(-5)^2]^5} = \frac{(-5)^4 \cdot (-5)^9}{(-5)^{10}} = \frac{(-5)^{13}}{(-5)^{10}} = (-5)^3 = \underline{\underline{-125}}$$

b)
$$100^3 : 25^3 \cdot (-2)^3 = [100 : 25 \cdot (-2)]^3 = [4 \cdot (-2)]^3 = (-8)^3 = \underline{\underline{-512}}$$

10. $+10 \text{ y } -6$

$|+10| + |-6| = 10 + 6 = 16$

$+10 - 6 = +4$

1 15

2 14

3 13

4 12

5 11

6 10