

EXAMEN DE MATEMÁTICAS 1º ESO

ALUMNO/A: SOLUCIÓN

④ Calcula

$$(0,5p) \text{ a) } (-5) \cdot 2 - (-3) \cdot 3 = -10 - (-9) = -10 + 9 = -1$$

$$(0,5p) \text{ b) } (-8) + (-6) : (-2) - 14 : (-2) + 5 = -8 + 3 - (-7) + 5 = -8 + 3 + 7 + 5 = 15 - 8 = 7$$

$$(0,5p) \text{ c) } 6 + [44 : (-2) - 9] \cdot (-3) = 6 + (-22 - 9) \cdot (-3) = 6 + (-31) \cdot (-3) = 6 + 93 = 99$$

$$(0,5p) \text{ d) } [(-10) + (-4)] : (5 \cdot (-3) + 8) + 27 = (-10 - 4) : (-15 + 8) + 27 = -14 : (-7) + 27 = 2 + 27 = 29$$

$$(0,5p) \text{ e) } [-10 \cdot (-9 + 2) + 7] : (-7) - (-2 - 4) \cdot (-5) = (-10 \cdot (-7) + 7) : (-7) - (-6) \cdot (-5) = (70 + 7) : (-7) - 30 = 77 : (-7) - 30 = -11 - 30 = -41$$

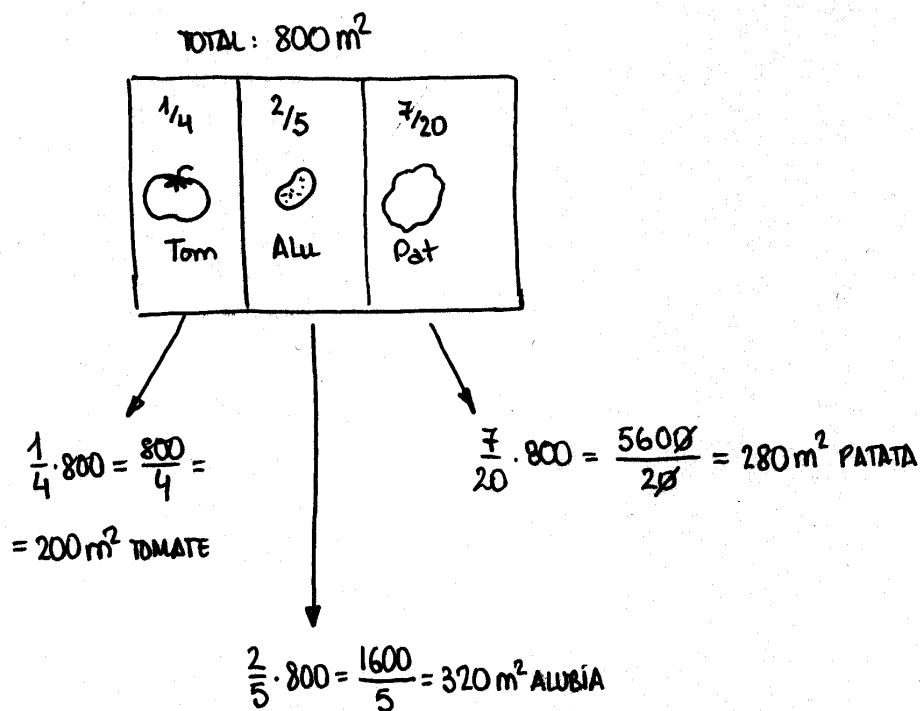
$$(0,5p) \text{ f) } (-3 - 2) \cdot [(-5) - 2] \cdot [7 - (-3)] : (5 - 4) = -5 \cdot (-7) \cdot 10 : 1 = 35 \cdot 10 : 1 = 350 : 1 = 350$$

② Un hortelano planta $\frac{1}{4}$ de su huerta de tomates, $\frac{2}{5}$ de alubias y el resto de patatas.

(0,75p) a) ¿Qué fracción de su huerta ha plantado con patatas?

$$1 - \left(\frac{1}{4} + \frac{2}{5} \right) = 1 - \left(\frac{5+8}{20} \right) = 1 - \frac{13}{20} = \frac{20-13}{20} = \frac{7}{20} \text{ con patatas}$$

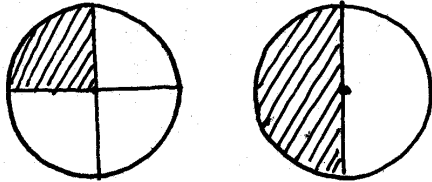
(0,75p) b) Si su huerta tiene una superficie total de 800 m^2 ¿qué superficie dedica a cada uno de los cultivos?



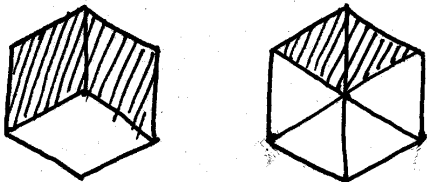
Efectivamente: $200 + 320 + 280 = 800 \text{ m}^2$

③ Coloca el signo $>$, $<$ ó $=$ entre los siguientes pares de fracciones, pasando previamente a denominador común y realiza una representación gráfica de las mismas:

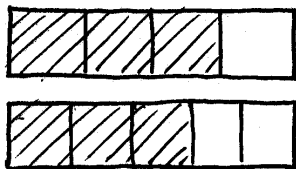
(0,5p) a) $\frac{1}{4} < \frac{1}{2}$ porque: $\left. \begin{array}{l} \frac{1}{4} \\ \frac{1}{2} = \frac{2}{4} \end{array} \right\} \frac{1}{4} < \frac{2}{4}$



(0,5p) b) $\frac{2}{3} > \frac{2}{6}$ porque: $\frac{2}{3} = \frac{4}{6} > \frac{2}{6}$



(0,5p) c) $\frac{3}{4} > \frac{3}{5}$ porque: $\left. \begin{array}{l} \frac{3}{4} = \frac{15}{20} \\ \frac{3}{5} = \frac{12}{20} \end{array} \right\} \frac{15}{20} > \frac{12}{20}$



④ Calcula y simplifica todo lo puedas:

$$(0,5p) \text{ a) } \frac{1}{2} - \frac{3}{4} - \frac{2}{3} + 1 = \frac{6}{12} - \frac{9}{12} - \frac{8}{12} + \frac{12}{12} = \frac{18-17}{12} = \frac{1}{12}$$

$$\text{mcm}(2,4,3) = 12$$

$$(0,5p) \text{ b) } \frac{4}{7} + \frac{1}{2} - \frac{8}{21} - \frac{5}{14} = \frac{24}{42} + \frac{21}{42} - \frac{16}{42} - \frac{15}{42} = \frac{45-31}{42} = \frac{14}{42} = \frac{7}{21} = \frac{1}{3}$$

$$\text{mcm}(2,7,14,21) = 2 \cdot 3 \cdot 7 = 42$$

$$\left. \begin{array}{l} 2=2 \\ 7=7 \\ 21=3 \cdot 7 \\ 14=2 \cdot 7 \end{array} \right\}$$

$$(0,5p) \text{ c) } -\frac{7}{5} : \left(-\frac{14}{3}\right) = -\frac{7}{5} \cdot \left(-\frac{3}{14}\right) = \frac{21}{70} = \frac{3}{10}$$

$$(0,75p) \text{ d) } 40 \cdot \left(-\frac{1}{4}\right) : 2 = -\frac{40}{4} : 2 = -10 : 2 = -5$$

$$(0,75p) \text{ e) } \left(\frac{1}{2} + \frac{1}{4}\right) \cdot \left(1 - \frac{1}{3}\right) = \left(\frac{2+1}{4}\right) \cdot \left(\frac{3-1}{3}\right) = \frac{3}{4} \cdot \frac{2}{3} = \frac{6}{12} = \frac{1}{2}$$

$$\begin{aligned} (1p) \text{ f) } \frac{3}{11} - \frac{1}{3} \cdot \left[2 - \frac{7}{11} \cdot \left(2 + \frac{2}{7}\right)\right] &= \frac{3}{11} - \frac{1}{3} \cdot \left[2 - \frac{7}{11} \cdot \left(\frac{14+2}{7}\right)\right] = \frac{3}{11} - \frac{1}{3} \cdot \left(2 - \frac{7}{11} \cdot \frac{16}{7}\right) = \\ &= \frac{3}{11} - \frac{1}{3} \cdot \left(2 - \frac{112}{77}\right) = \frac{3}{11} - \frac{1}{3} \cdot \left(2 - \frac{16}{11}\right) = \frac{3}{11} - \frac{1}{3} \cdot \left(\frac{22-16}{11}\right) = \frac{3}{11} - \frac{1}{3} \cdot \frac{6}{11} = \\ &= \frac{3}{11} - \frac{6}{33} = \frac{3}{11} - \frac{2}{11} = \frac{1}{11} \end{aligned}$$