



GLOBAL 2ª EVALUACIÓN

Name: _____

1) Work out and simplify:

$$\frac{9}{10} - \frac{2}{5} \div \left(\frac{1}{2} + \frac{1}{6} \right) =$$

2) Work out and simplify:

$$\left(\frac{3}{5} + \frac{1}{2} \right) \times \left(\frac{2}{3} - \frac{3}{2} \right) =$$

3) Complete:

<input type="checkbox"/> % of 80 is 20	10% of 175 is <input type="checkbox"/>
<input type="checkbox"/> % of 175 is 21	32% of <input type="checkbox"/> is 200

4) Ashley bought $\frac{7}{8}$ of a kilo of cookies and ate one quarter of a kilo. How much was left?

5) Express in metres:

- a) 27.46 dam + 436.9 dm
- b) 0.85 hm + 9.2 dam + 4600 cm

6) Solve and check:

$$(6x - 1) - (2x + 5) = 2x - 3$$

7) Solve and check:

$$3(2x - 1) - 5(3x - 2) = 7$$

8) In a box there are five dozens of chocolates. 20% of them are dark chocolate. How many chocolates are not dark chocolate?

9) Four cooks are preparing a banquet. Together they will finish in three hours. In how many hours will one cook finish? And six cooks?

10) Four times a number plus seven is equal to six times a number minus seven. What is the number?

SOLUTION

$$1) \frac{9}{10} - \frac{2}{5} \div \left(\frac{1}{2} + \frac{1}{6} \right) = \frac{9}{10} - \frac{2}{5} \div \left(\frac{3+1}{6} \right) = \frac{9}{10} - \frac{2}{5} \div \frac{4}{6} = \frac{9}{10} - \frac{2}{5} \cdot \frac{6}{4} = \frac{9}{10} - \frac{12}{20} = \frac{9}{10} - \frac{6}{10} = \frac{3}{10}$$

$$2) \left(\frac{3}{5} + \frac{1}{2} \right) \times \left(\frac{2}{3} - \frac{3}{2} \right) = \frac{6+5}{10} \times \frac{4-9}{6} = \frac{11}{10} \times \frac{-5}{6} = \frac{-55}{60} = -\frac{11}{12}$$

3) Complete:

\square % of 80 is 20 $\frac{x}{100} = \frac{20}{80} \rightarrow x = \frac{2000}{80} = 25$	10% of 175 is \square $\frac{10}{100} = \frac{x}{175} \rightarrow x = \frac{1750}{100} = 17.5$
\square % of 175 is 21 $\frac{x}{100} = \frac{21}{175} \rightarrow x = \frac{2100}{175} = 12$	32% of \square is 200 $\frac{32}{100} = \frac{200}{x} \rightarrow x = \frac{200 \times 100}{32} = 625$

4) Ashley bought $\frac{7}{8}$ of a kilo of cookies and ate one quarter of a kilo. How much was left? $\frac{7}{8} - \frac{1}{4} = \frac{7-2}{8} = \frac{5}{8}$ of a kilo was left

5) Express in metres:

c) $27.46 \text{ dam} + 436.9 \text{ dm} = 274.6 \text{ m} + 43.69 \text{ m} = 318.29 \text{ m}$

d) $0.85 \text{ hm} + 9.2 \text{ dam} + 4600 \text{ cm} = 85 \text{ m} + 92 \text{ m} + 46 \text{ m} = 223 \text{ m}$

$$6) (6x-1) - (2x+5) = 2x-3 \rightarrow 6x-1-2x-5 = 2x-3 \rightarrow 6x-2x-2x = -3+5+1$$

$$2x = 3 \rightarrow x = \frac{3}{2}$$

$$\text{Checking: } \left(6 \cdot \frac{3}{2} - 1 \right) - \left(2 \cdot \frac{3}{2} + 5 \right) = 2 \cdot \frac{3}{2} - 3 \rightarrow \left(\frac{18}{2} - 1 \right) - \left(\frac{6}{2} + 5 \right) = \frac{6}{2} - 3$$

$$(9-1) - (3+5) = 3-3 \rightarrow 8-8 = 0 \rightarrow 0 = 0$$

$$7) 3(2x-1) - 5(3x-2) = 7 \rightarrow 6x-3-15x+10 = 7 \rightarrow -9x = 7-10+3$$

$$-9x = 0 \rightarrow x = 0$$

$$\text{Checking: } 3(2 \cdot 0 - 1) - 5(3 \cdot 0 - 2) = 7 \rightarrow 3 \cdot (-1) - 5 \cdot (-2) = 7 \rightarrow -3 + 10 = 7$$

8) In a box there are five dozens of chocolates. 20% of them are dark chocolate.

How many chocolates are not dark chocolate?

$$5 \times 12 = 60 \rightarrow 80\% \text{ of them are NOT dark chocolate}$$

$$80\% \text{ of } 60 = \frac{80 \times 60}{100} = 48 \text{ chocolates are not dark chocolate}$$

9) Four cooks are preparing a banquet. Together they will finish in three hours. In how many hours will one cook finish? And six cooks?

INVERSE

4 cooks ---- 3 hours

1 cook ----- x hours

$$\frac{4}{1} = \frac{x}{3} \rightarrow x = 12 \text{ One cook 12 hours}$$

4 cooks ---- 3 hours

6 cooks ----- x hours

$$\frac{4}{6} = \frac{x}{3} \rightarrow x = 12 \div 6 = 2 \text{ Six cooks 2 hours}$$



10) Four times a number plus seven is equal to six times a number minus seven.

What is the number?

Number - x

$$4x + 7 = 6x - 7$$

$$4x - 6x = -7 - 7$$

$$-2x = -14 \rightarrow x = \frac{-14}{-2} \rightarrow x = 7$$

The number is 7