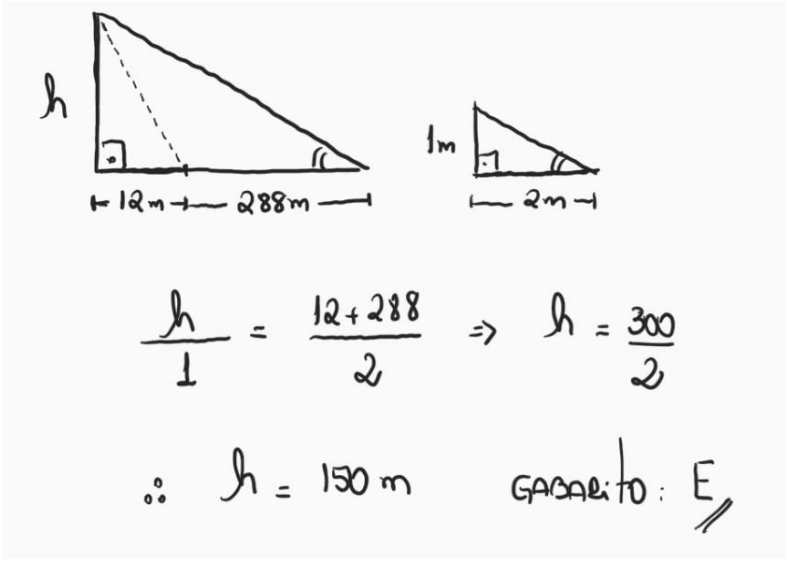
QUESTÕES OBJETIVAS

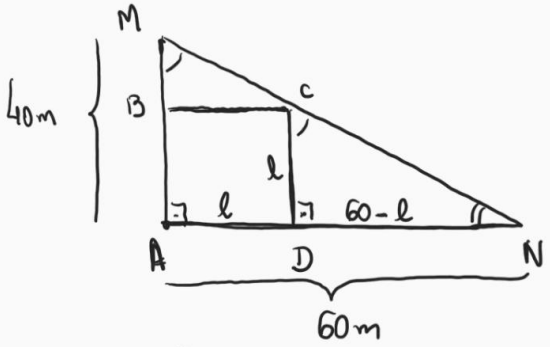
QUESTÃO 16



$$\frac{h}{1} = \frac{12+288}{2} \Rightarrow h = \frac{300}{2}$$

$$\therefore h = 150\,m \qquad \text{GABARITO: E}$$

QUESTÃO 17



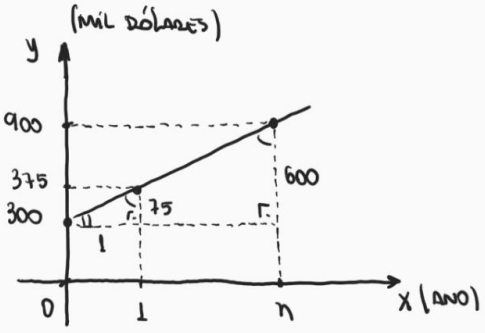
$$\frac{40}{l} = \frac{60}{60-l} \Rightarrow \frac{2}{l} = \frac{3}{60-l}$$

$$3l = 120 - 2l$$
$$5l = 120$$
$$l = 24\,m$$

$$\therefore 2P = 4.24 = 96\,m$$

GABARITO: B

QUESTÃO 18

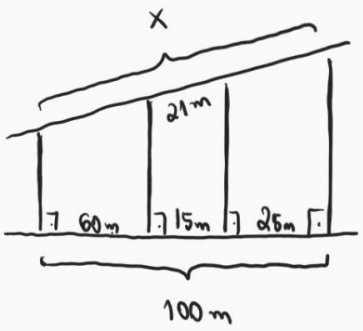


$x = 0 \Rightarrow 2016$
$x = 1 \Rightarrow 2017$
$\vdots$
$x = n \Rightarrow ?$

$$\frac{1}{n} = \frac{75}{600} \Rightarrow n = \frac{600}{75} = 8$$

$$\therefore 2016 + 8 = 2024 \qquad \text{GABARITO: C}$$

QUESTÃO 19



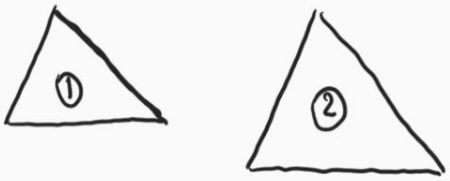
$$\frac{x}{21} = \frac{100}{15}$$

$$\frac{x}{7} = \frac{100}{5}$$

$$x = 7 \cdot 20 \quad \therefore x = 140\,m$$

GABARITO: A

QUESTÃO 20



$$\frac{2P_1}{2P_2} = k \qquad \frac{A_1}{A_2} = k^2 \Rightarrow \frac{31}{124} = k^2$$

$$k^2 = \frac{1}{4} \qquad k = \frac{1}{2}$$

$$\frac{43}{2P_2} = \frac{1}{2} \qquad 2P_2 = 86\,m$$

Logo, a soma dos perímetros é

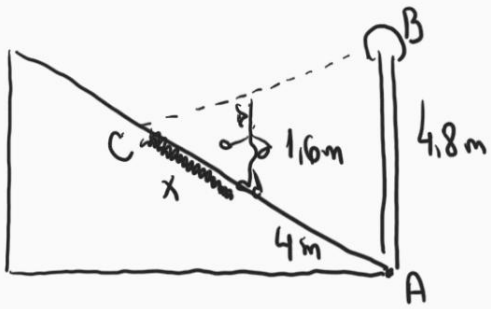
$$43 + 86 = 129\,m$$

Assim o custo é dado por:

$$129 \times 23 = 2967$$

$\therefore$ R$ 2967,00 GABARITO: A

QUESTÃO 21



$\frac{1,6}{4,8} = \frac{x}{x+4}$ $\quad \frac{1}{3} = \frac{x}{x+4}$ $\quad 3x = x+4$

$2x = 4$

$x = 2\,m$

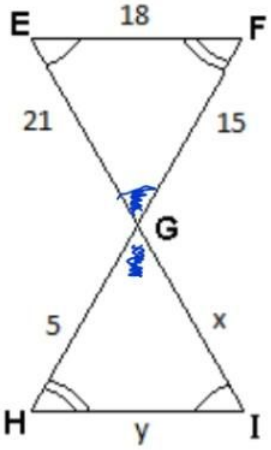
∴ 2m A MEDIDA DA SOMBRA

GABARITO: D

QUESTÕES DISCURSIVAS

QUESTÃO 09

a)



$\frac{5}{15} = \frac{y}{18}$

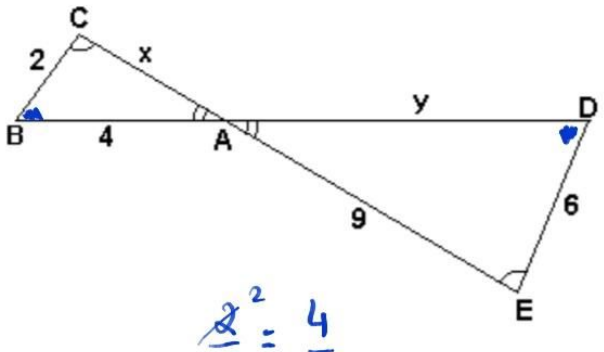
$\frac{1}{3} = \frac{y}{18}$

$y = 6$ u.c.

$\frac{5}{15} = \frac{x}{21}$

$\frac{1}{3} = \frac{x}{21}$ $\quad x = 7$ u.c.

b)



$\frac{x}{9} = \frac{2^2}{6^2}$ $\quad\quad$ $\frac{2^2}{6^2} = \frac{4}{y}$

$\frac{x}{9} = \frac{1}{3}$ $\quad\quad$ $\frac{1}{3} = \frac{4}{y}$

$3x = 9$

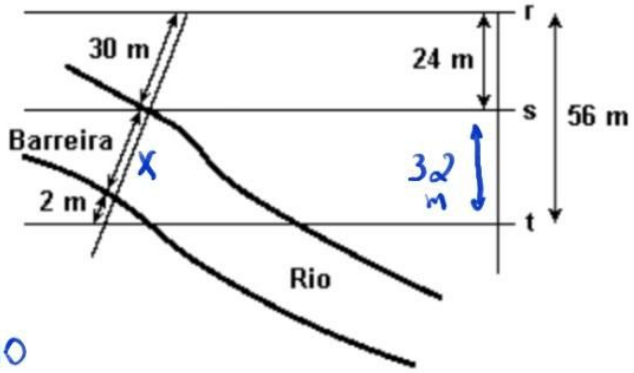
$x = 3$ u.c. $\quad\quad$ $y = 12$ u.c.

QUESTÃO 10

$\frac{30}{x+2} = \frac{24^8}{32_8}$

$\frac{30^3}{x+2} = \frac{3^3}{4}$

$\frac{10}{x+2} = \frac{1}{4}$



$x + 2 = 40$

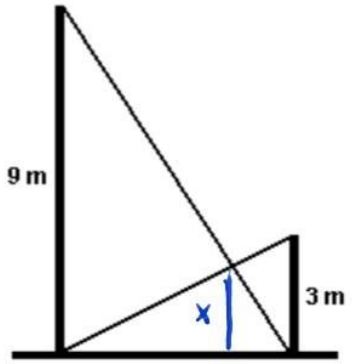
$x = 38$ m

QUESTÃO 11

$x = \frac{3.9}{3+9}$

$x = \frac{27^3}{12_3}$

$x = \frac{9}{4} \Rightarrow \quad x = 2{,}25$ m



QUESTÃO 12

$$\frac{11}{x} = \frac{5}{8-x}$$

$$5x = 88 - 11x$$

$$16x = 88$$

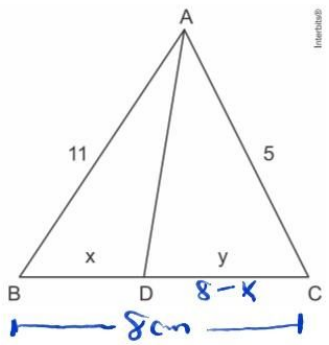
$$x = \frac{88}{16}$$

$$x = \frac{11}{2} = 5{,}5\ cm$$

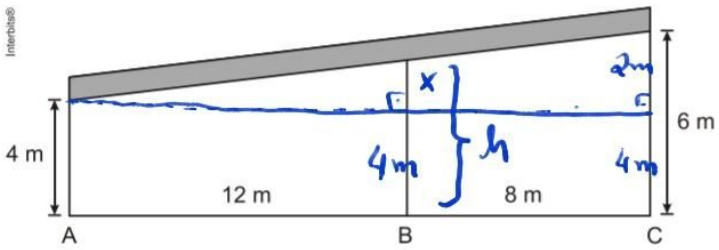
$$y = 8 - x$$

$$y = 8 - 5{,}5$$

$$y = 2{,}5\ cm$$



QUESTÃO 13



$$\frac{12}{x} = \frac{12+8}{2}$$

$$\frac{12}{x} = \frac{20}{2}$$

$$\frac{12}{x} = \frac{10}{1}$$

$$x = 1{,}2\ m$$

$$\therefore h = 1{,}2 + 4 = 5{,}2\ m$$

QUESTÃO EXTRA

$$A_1 = 2 \cdot A_2$$

$$\frac{A_1}{A_2} = 2$$

$$k^2 = 2$$

$$k = \sqrt{2}$$

$$\frac{4}{4-x} = \frac{\sqrt{2}}{1}$$

$$4\sqrt{2} - x\sqrt{2} = 4$$

$$x\sqrt{2} = 4\sqrt{2} - 4$$

$$x = \frac{4\sqrt{2} - 4}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$$

$$x = \frac{8 - 4\sqrt{2}}{2}$$

$$x = (4 - 2\sqrt{2})\ u.c.$$