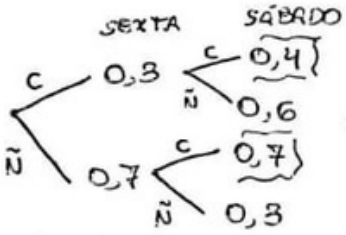
(1)



CHOVER NO SÁBADO $\Rightarrow 0,3 \cdot 0,4 = 0,12$ + $0,7 \cdot 0,7 = 0,49$

$0,61$

$\Downarrow$

61% **e)**

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(2) ÁREAS IGUAIS

$\frac{b \cdot h}{2} = b \cdot h \rightarrow \frac{9 \cdot 8}{2} = x(x+5)$

$x^2 + 5x = \frac{36}{2}$ $\quad x^2 + 5x - 36 = 0$

$\Delta = 25 - 4 \cdot (1) \cdot (-36)$

$\Delta = 25 + 144$

$\Delta = 169 \Rightarrow \sqrt{\Delta} = 13$

$x = \frac{-5 \pm 13}{2}$

$x_1 = -9$ ou $x_2 = 4$

$\Downarrow$ NEGATIVO

$\rightarrow$ *

$\rightarrow$ * $y = ? \Rightarrow y^2 = (5+4)^2 + 4^2$

$y^2 = 81 + 16 \rightarrow y^2 = 97 \rightarrow y = \sqrt{97}$

$9^2 = 81$; $10^2 = 100$ **c)**

$\Downarrow$

$y^2 \Rightarrow 9 < y < 11$

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(3) DICA $\Rightarrow$ SUPÕE QUE O PRODUTO CUSTA 100 REAIS

$\rightarrow$ 1 $\Rightarrow$ TOTAL = 400, PAGO = 300, DESCONTO = $\frac{100}{400} = 25\%$ $\Downarrow$

2 $\Rightarrow$ TOTAL = 300, PAGO = 200, DESCONTO = $\frac{100}{300} \approx 35\%$

3 $\Rightarrow$ TOTAL = 200, PAGO = 150, DESCONTO = $\frac{50}{200} = 25\%$ $\Downarrow$

1 e 3 IGUAIS $\Rightarrow$ **d)**

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(4) QUESTÃO TRABALHOSA $\rightarrow$

15	5	12	9	12
5	20	15	15	10
4	4	4	6	8
24	29	31	30	30

$\Uparrow$ **c)**

$\rightarrow$ MAIOR NOTA

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(5) $72 km/h \Rightarrow 20 m/s$ $\quad \times 3,6$

$\rightarrow +25\% \Rightarrow 5 m/s$ $\Rightarrow v = 25 m/s$

$\rightarrow$ CADA NITRO DURA 5 seg

$\rightarrow 25 \cdot 5 = 125 m$

$\rightarrow$ 3 NITROS $\Rightarrow 125 \cdot 3 = 375 m$

RAZÃO $\Rightarrow \frac{375}{6000} \overset{\div 25}{=} \frac{15}{240} \overset{\div 15}{=} \frac{1}{16}$ **c)**

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(6) ANÁLISE GRÁFICA

$\rightarrow$ LUCRO = FATURAMENTO - DESPESA $\Rightarrow$ MARÇO = 20, ABRIL = 20 **d)**

⑦ $S = (1, 5, 9, 13, \dots) \Rightarrow a_1 = 1$, $x = 4$

26 ALUNOS = 26 ELEMENTOS

$a_n = a_1 + (n-1)\cdot x$

$a_{26} = 1 + (26-1)\cdot 4$

$a_{26} = 1 + 25 \cdot 4 \rightarrow a_{26} = 101$ **e)**

⑧ ÁREA TOTAL = 7x HEXÁGONOS $\Rightarrow$ 90cm { 30cm, 30cm, 30cm } $\Rightarrow$ 45cm

$h = \frac{\ell\sqrt{3}}{2}$, $\ell = \frac{30\sqrt{3}}{3}$

$15 = \frac{\ell\sqrt{3}}{2}$ | $\ell = 10\sqrt{3}$

ÁREA HEXÁGONO = $6 \times \frac{\ell^2\sqrt{3}}{4} = 6 \cdot \frac{100 \cdot 3 \cdot \sqrt{3}}{4} = 450\sqrt{3}$

ÁREA TOTAL = $7 \times 450\sqrt{3} = 3150\sqrt{3}$ **d)**

⑨ VOLUME = ÁREA × ALTURA

$60 = \text{ÁREA} \times 5$

ÁREA MAQUETE = $12\,dm^2$

$12\,dm^2 = 0{,}12\,m^2$ (MAQUETE)

ESCALA:	MAQUETE	REAL
	1 m	48 m
	$1\,m^2$	$48 \cdot 48\,m^2$
	$0{,}12\,m^2$	x

$x = 2304 \cdot 0{,}12$

$x = 276{,}48\,m^2$ **b)**

⑩ $A = \frac{1 \cdot K}{2}$; $B = \frac{2K}{3}$; $C = \frac{3 \cdot K}{4} \Rightarrow \frac{K}{2} + \frac{2K}{3} + \frac{3K}{4} = 69000$

$\frac{6K + 8K + 9K}{12} = 69000$

$23K = 69 \cdot 10^3 \cdot 12$

$K = 36 \cdot 10^3$

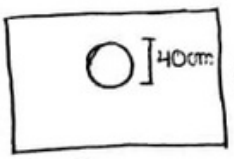
$K = 36000$

$A = \frac{36000}{2} = 18000$

$B = \frac{72000}{3} = 24000$

$C = \frac{108000}{4} = 27000$ **c)**

⑪



$2(2x + 2) = 12$

$6x = 12$

$x = 2$

ÁREA PAREDE = $2 \cdot 4 = 8\,m^2$

ÁREA ALVO = $\pi \cdot r^2 \Rightarrow 3{,}14 \cdot 0{,}04\,m^2$ (r = 0,2m)

$p = \frac{3{,}14 \cdot 0{,}04}{8} \cdot 200 = \frac{1{,}57}{100} = 1{,}57\%$ **b)**

⑫ A $\rightarrow 10 + 1 \cdot x - 10$ $\rightarrow$ 17 km $\Rightarrow 10 + 17 - 10 = 17$ REAIS

B $\rightarrow (9 + 0{,}5x)\,0{,}8$ $\rightarrow$ 17 km $\Rightarrow (9 + 8{,}5) \cdot 0{,}8$

$\Rightarrow (17{,}5) \cdot 0{,}8 = 14$ REAIS

20% OFF

a)

(13) VOLUME TOTAL ⇒ CILINDRO: $Ab \cdot h$

↳ $\pi \cdot R^2 \cdot h$

NOVO RECIPIENTE → 

$\rightsquigarrow \left(\frac{h_1}{h_2}\right)^3 = \frac{V_1}{V_2} \rightsquigarrow \left(\frac{h}{\frac{h}{2}}\right)^3 = \frac{V}{V'} \rightsquigarrow \left(h \cdot \frac{2}{h}\right)^3 = \frac{V}{V'} \rightsquigarrow$

$\rightsquigarrow 8 = \frac{V}{V'} \rightsquigarrow V' = \frac{V}{8} \Rightarrow V' = \frac{1}{3} \cdot \pi R^2 \cdot h \cdot \frac{1}{8}$

$\boxed{V' = \frac{\pi R^2 \cdot h}{24}}$

LOGO:

$\frac{\text{TOTAL}}{V'} = \frac{\pi \cdot R^2 \cdot h}{\frac{\pi \cdot R^2 \cdot h}{24}} = 24$ | d)

(14) $x \rightsquigarrow$ BONÉS $\longrightarrow x_v = ?$ $x_v = \frac{-b}{2a} = \frac{-12}{2(-1)} = 6$ | b)

$y \rightsquigarrow$ LUCRO

(15) A → $2\pi R = 2a$ ↷ $V = Ab \cdot h \Rightarrow \pi \cdot R^2 \cdot h \rightsquigarrow \pi \cdot \frac{a^2}{\pi^2} \cdot a \rightsquigarrow V_A = \frac{a^3}{\pi}$

$R = \frac{a}{\pi}$

B → $2\pi R = a$ ↷ $V = Ab \cdot h \Rightarrow \pi \cdot R^2 \cdot h \rightsquigarrow \pi \cdot \frac{a^2}{4\pi^2} \cdot 2a = \frac{a^3}{2\pi} = V_B$

$R = \frac{a}{2\pi}$

$\frac{V_A}{V_B} = \frac{a^3}{\pi} \cdot \frac{2\pi}{a^3} \rightsquigarrow \frac{V_A}{V_B} = 2 \quad V_A = 2V_B$ | d)