

(11)

	0		0
			0
0		0	

		0	
0			
			0
	0		

 $\rightarrow 2 \text{ (C)}$

(43)

$$(12) (x + 2^{2025})^2 - (x - 2^{2025})^2 = 2^{2026}$$

$$\cancel{x^2} + \cancel{2 \cdot 2^{2025}} + 2 \cdot x \cdot 2^{2025} - \cancel{x^2} + \cancel{2 \cdot 2^{2025}} + 2 \cdot x \cdot 2^{2025} = 2^{2026}$$

$$2^{2026} x + 2^{2026} x = 2^{2026}$$

$$2 \cdot 2^{2026} \cdot x = 2^{2026}$$

$$2x = 1 \rightarrow \boxed{x = \frac{1}{2}} \rightarrow \text{(A)}$$

$$(13) A_{\text{peq}} = \pi r^2$$

$$A_{\text{grande}} = \pi \cdot (5r)^2 = 25\pi r^2 \rightarrow A_{\text{negra}} = A_{\text{cg}} - 9 \cdot A_{\text{cp}} =$$

$$= 25\pi r^2 - 9\pi r^2 =$$

$$= 16\pi r^2 = \pi \cdot (4r)^2$$

$$\downarrow$$

$$R = 4\text{cm} \rightarrow \text{(C)}$$

(14)

P

$$A = \frac{t}{100} \cdot P$$

A

$$P = \frac{4t}{100} A$$

$$n \cdot A = P$$

$$\downarrow$$

$$A = \frac{t}{100} \cdot \frac{4t}{100} \cdot A$$

$$100 \cdot 100 = 4t^2$$

$$t^2 = \frac{10000}{4} = 2500$$

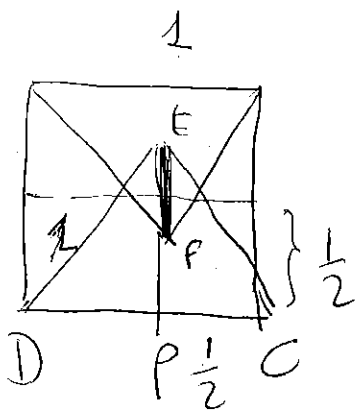
$$t = \pm \sqrt{2500} = 50$$

Ana pesa la mitad que Pau
 $\downarrow$
 Hay que multiplicar
 el peso de Ana por
 2 para que pesen
 lo mismo

 $\downarrow$
 (B)

(15)

(49/4)



2 CDE es equilateral

$$\left(\frac{1}{2}\right)^2 + EP^2 = 1^2$$

$$EP^2 = 1 - \frac{1}{4} = \frac{3}{4}$$

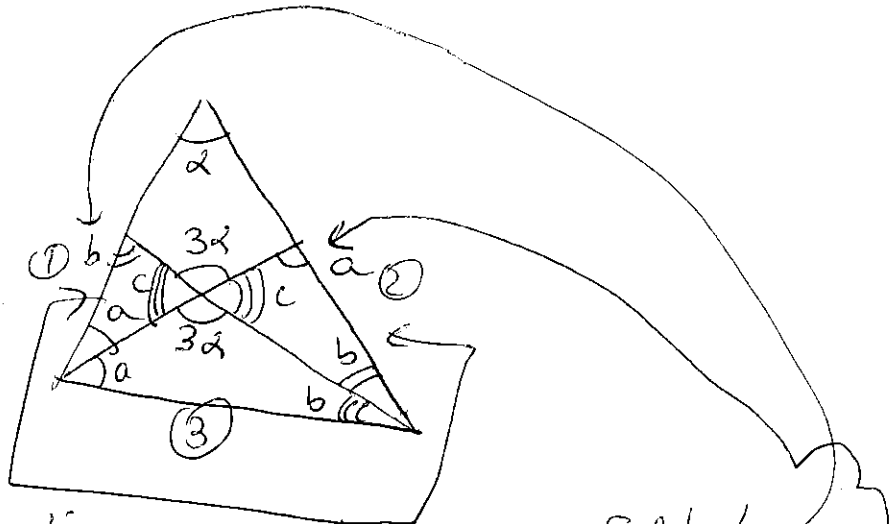
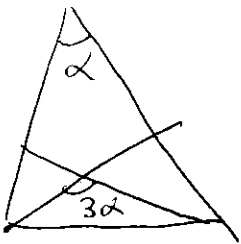
$$EP = \frac{\sqrt{3}}{2} \rightarrow \frac{EF}{2} = \frac{\sqrt{3}}{2} - \frac{1}{2} = \frac{\sqrt{3}-1}{2}$$

$$EP = 2 \cdot \frac{\sqrt{3}-1}{2} = \sqrt{3}-1 \rightarrow \text{D}$$

(16)

$$15951 \rightarrow + 110 \text{ km} \rightarrow \text{B}$$

(17)



$$1^\circ \rightarrow a + c + \text{otro} = 180 \rightarrow \text{Falta } b$$

$$2^\circ \rightarrow b + c + \text{otro} = 180 \rightarrow \text{Falta } a$$

$$3^\circ \rightarrow a + b + 3\alpha = 180 \rightarrow 3\alpha = c$$

Ad' que en el centro tengo
y ángulos iguales

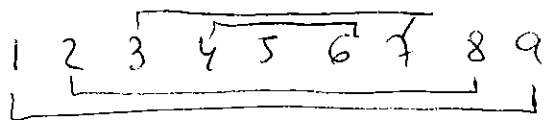
$$3\alpha = c$$

$$\rightarrow c = 90^\circ$$

$$3\alpha = 90^\circ$$

$$\alpha = 30^\circ \rightarrow \text{B}$$

(18)

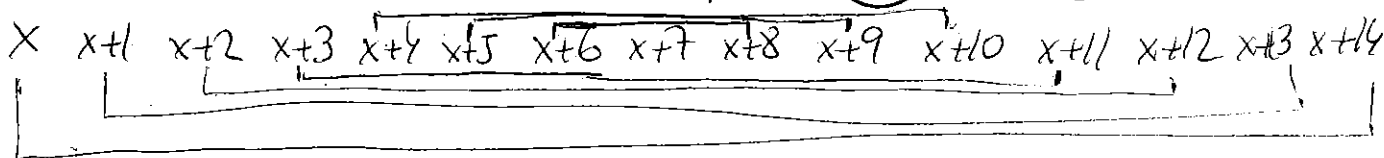

 $\Sigma = 45 \rightarrow 45 : 3 = 15$ cada fila o col.

(45)

(19)

1	9	5
6	2	7
8	4	3

→ (A)



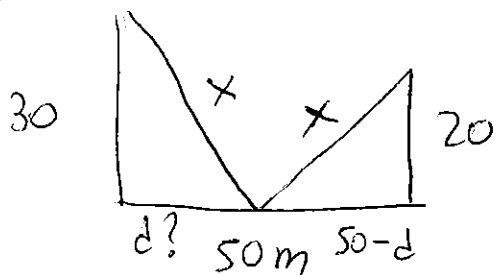
$$7 \cdot (2x+14) + x+7 = n$$

$$14x + 98 + x + 7 = n$$

$$15x = n - 105$$

$$\boxed{x = \frac{n-105}{15} = \frac{n}{15} - 7} \rightarrow \text{NO ESTÁ !!}$$

(20)



$$\left. \begin{aligned} x^2 &= 20^2 + (50-d)^2 \\ x^2 &= 30^2 + d^2 \end{aligned} \right\}$$

$$\begin{aligned} 400 + 2500 + d^2 - 100d &= \\ &= 900 + d^2 \\ 2000 &= 100d \end{aligned}$$

$$\boxed{d = 20} \rightarrow (B)$$

(21)

$$100 < n < 200$$

$$n = 10x + 1$$

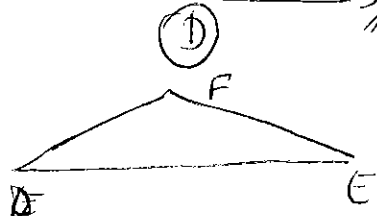
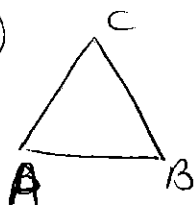
$$n = 9y + 5$$

$$n = 7z + a$$

$$\begin{array}{r} 101 \ 111 \ 121 \ (131) \ 141 \ 151 \ 161 \ 171 \ 181 \ 191 \\ -56 \\ \hline 96 \ 106 \ 116 \ (126) \end{array}$$

$$\begin{array}{r} 131 \ 17 \\ 61 \ 18 \\ \hline 5 \end{array}$$

(22)



$$\begin{aligned} A+B+C &= 180 \rightarrow 2D+2E+C=180 \\ D+E+F &= 180 \rightarrow D+E+2C=180 \end{aligned}$$

$$\begin{aligned} 2D+2E+C &= 180 \\ -(-2) \rightarrow -2D-2E-4C &= -360 \\ \hline -3C &= -180 \end{aligned}$$

$$\boxed{C = 60^\circ}$$

↓
(A)

(23)

$$\begin{array}{r}
 R' \quad P \quad No \\
 + \quad P \quad R \quad No \\
 \hline
 M \quad M \quad No \quad No \\
 1 \quad 1 \quad 0 \quad 0
 \end{array}$$

$$M = 1$$

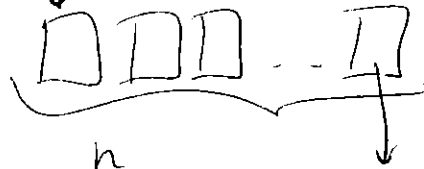
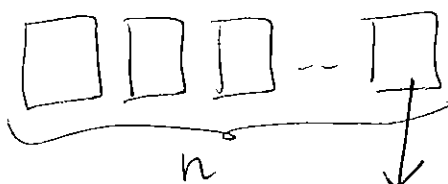
$$N = 0$$

P	2	3	4	5	6	7	8	
R	8	7	6	5	4	3	2	1

6 formas $\rightarrow$ (D)

(46)

(24)



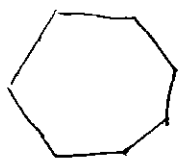
$$4 + n - 1 + n - 1 + n = 3n + 2$$

$$\cancel{26} \quad \cancel{28} \quad \cancel{30} \quad \cancel{32}$$

$$SI = 24 + 2$$

(B)

(25)



$$\Sigma(\alpha - 1) = 1000^\circ$$



$$\alpha = \frac{360}{n}$$

$$\beta = 180 - \frac{360}{n}$$

$$\begin{aligned}
 \Sigma \text{ todos } \angle \text{ angulos} &= n \cdot \left(180 - \frac{360}{n} \right) = \\
 &= 180 \cdot n - 360
 \end{aligned}$$

Si n lados $\rightarrow$ los angulos suman $180n - 360$

Si $n=7 \rightarrow 180 \cdot 7 - 360 = 1260 - 360 = 900^\circ \rightarrow$ más lados.

Si $n=8 \rightarrow 180 \cdot 8 - 360 = 1440 - 360 = 1080^\circ$ Podría ser $100^\circ + 80^\circ$

Si $n=9 \rightarrow 180 \cdot 9 - 360 = 1620 - 360 = 1260^\circ$ NO PUEDE SER $1200 + 260^\circ$ (no convexo)

$n=8$ (E)

(26)

40cl A	0,4	20cl L	0,2	→	6 L
60cl N	0,6	80cl N	0,8		a A
					2a N

1

	Saco	N	A	L
1 ^o Bot	x	0,6x	0,4x	0
2 ^o Bot	y	0,8y	0	0,2y
TOT	100cl	0,6x+0,8y	0,4x	0,2y

$$\left. \begin{aligned} x+y &= 100 \\ 0,6x+0,8y &= 2 \cdot 0,4x \end{aligned} \right\}$$

$$\left. \begin{aligned} x+y &= 100 \\ -0,2x+0,8y &= 0 \end{aligned} \right\} \cdot 5 \rightarrow \left. \begin{aligned} x+y &= 100 \\ -x+4y &= 0 \end{aligned} \right\}$$

Comp

	N	A
0,6 · 80 = 48	0,4 · 80 = 32	
0,8 · 20 = 16		
64		

(51)

$$\boxed{x=80}$$

$$\left. \begin{aligned} 5y &= 100 \\ y &= \frac{100}{5} = 20 \end{aligned} \right\} \leftarrow$$

$$0,2 \cdot 20 = 4 \text{ cl de}$$

língua
↓
(D)

$$a+b+c+d = 4+3+1+5 = 13$$

↓
(A)

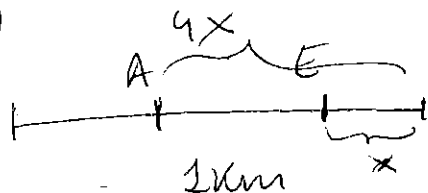
(27)

a, b, c, d diferentes > 0

$$(6-a)(6-b)(6-c)(6-d) = 30$$

$$30 = 2 \cdot 3 \cdot 5 \cdot 1 \rightarrow \begin{cases} a=4 \\ b=3 \\ c=1 \\ d=5 \end{cases}$$

(28)



$$\text{Arua} \rightarrow 5 \text{ min} \rightarrow v_A = \frac{1000 \text{ m}}{5 \text{ min}} = 200 \text{ m/min}$$

$$\text{Empar} \rightarrow 4 \text{ min} \rightarrow v_E = \frac{1000 \text{ m}}{4 \text{ min}} = 250 \text{ m/min}$$

Em t han recorrido $\left\{ \begin{aligned} \text{Arua } 200t \\ \text{Empar } 250t \end{aligned} \right.$ es queda $\left\{ \begin{aligned} 1000 - 200t \\ 1000 - 250t \end{aligned} \right.$

$$\rightarrow (1000 - 250t) \cdot 4 = 1000 - 200t$$

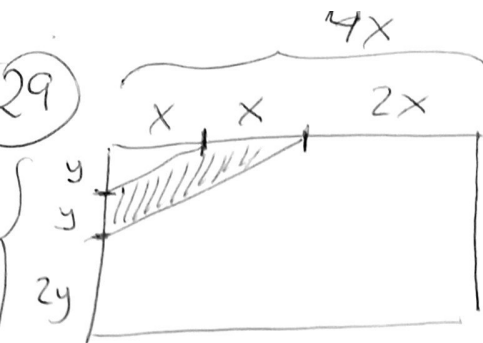
$$4000 - 1000t = 1000 - 200t$$

$$3000 = 800t$$

distancia queda a Arua =

$$= 1000 - 200 \cdot \frac{15}{4} = 1000 - 750 = 250 \text{ m}$$

$$t = \frac{3000}{800} = \frac{30}{8} = \frac{15}{4} \text{ min}$$



$2y$ $2x$
 $A_1 = \frac{4xy}{2}$

y x
 $A_2 = \frac{xy}{2}$

$A_{\text{gris}} = \frac{4xy}{2} - \frac{xy}{2} = \frac{3xy}{2}$

$A_{\text{red}} = 4x \cdot 4y = 16xy$

$\frac{A_{\text{gris}}}{A_{\text{red}}} = \frac{\frac{3xy}{2}}{16xy} = \frac{3}{32} \rightarrow \textcircled{C}$

30 1 2 3 4 5 6 $\rightarrow$ Treuen se estar saltadas los aros pares con los impares para que el producto de aros consecutivos sea par.

$P I P I P I$
 $\sigma I P I P I P$
 $P_3 = 3! = 6$
 $P_3 = 6$
 $6 \cdot 6 = 36$ forms
 $36 \cdot 4 = 144$ forms
 $\downarrow$
 $\textcircled{D}$

σ 2 PP juntas s a cada lado hay I:

$I P P I P I$

$\sigma I P I P P I$

otras 36

otras 36