

NAME: _____

Matemáticas 7

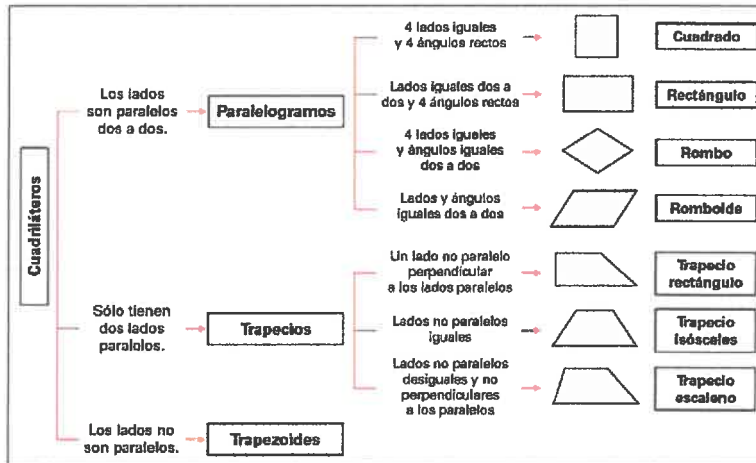
UNIDAD 4: Paralelogramos y Triángulos

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**KEEP
CALM
AND
DO THE
MATH**

Escuela St. Brendan
Señor Martínez

Un **PARALELOGRAMO** es un cuadrilátero con 2 pares de lados paralelos. Los tipos de paralelogramos son el cuadrado, el rectángulo, el romboide y el rombo.

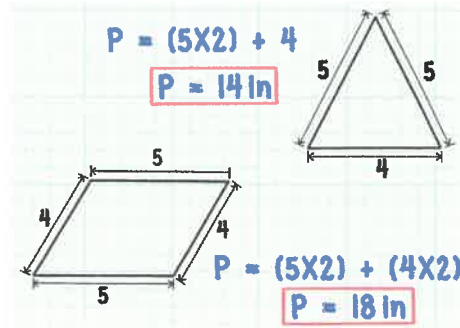
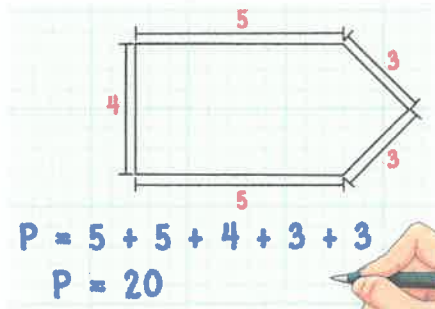


PARALELOGRAMOS: cuadriláteros que tienen los lados opuestos iguales y paralelos dos a dos.

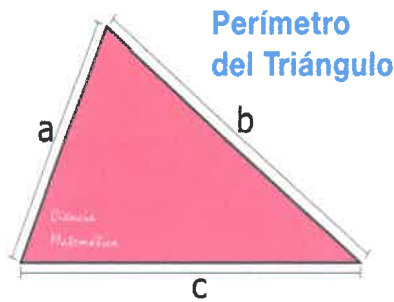
CUADRADO	RECTÁNGULO	ROMBO	ROMBOIDE
<ul style="list-style-type: none"> • Lados iguales. • Ángulos de 90°. • Diagonales iguales y perpendiculares. 	<ul style="list-style-type: none"> • Lados iguales dos a dos. • Ángulos de 90°. • Diagonales (d) iguales y no perpendiculares. 	<ul style="list-style-type: none"> • Lados iguales. • Ángulos opuestos iguales. • Diagonales (d₁ y d₂) desiguales y perpendiculares. 	<ul style="list-style-type: none"> • Lados iguales dos a dos. • Ángulos opuestos iguales. • Diagonales (d₁ y d₂) desiguales y no perpendiculares.

EL Perímetro

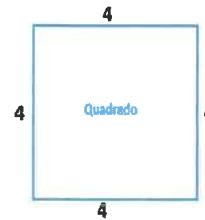
El **perímetro** es la medida del contorno de una figura, éste se mide en unidades lineales, tales como el centímetro (**cm**), el metro (**m**), el kilómetro (**km**), etcétera.



PERÍMETRO = ¡Suma de todas las dimensiones!



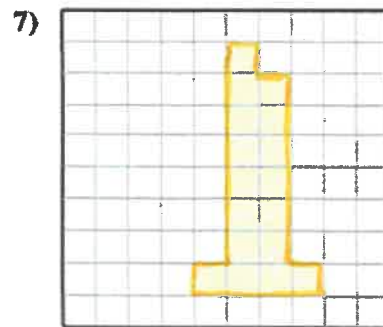
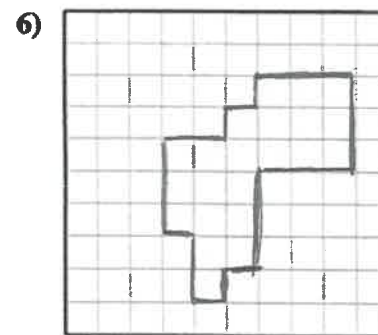
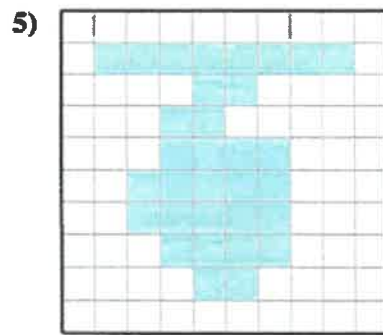
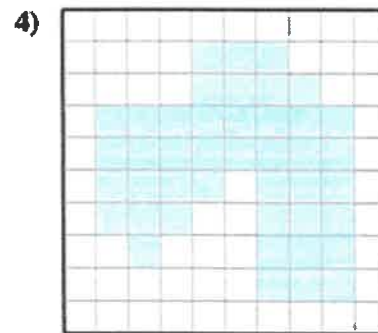
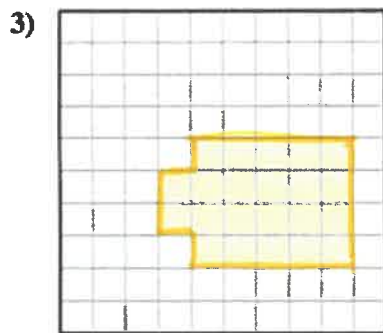
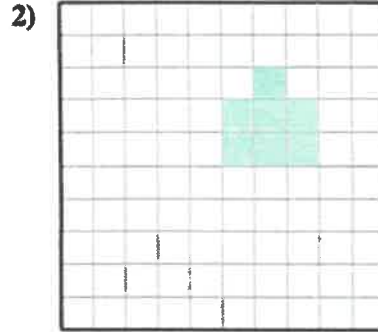
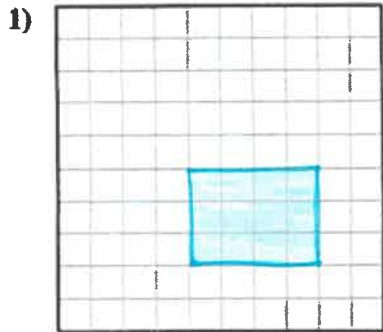
$P_{\text{perímetro}} \triangle = a + b + c$



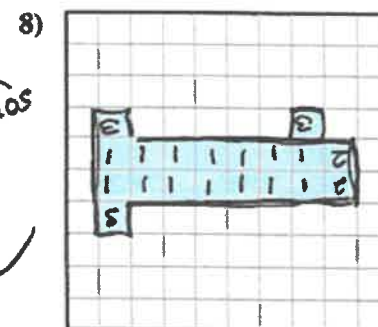
$\text{Perímetro} = 4 + 4 + 4 + 4 = 16 \text{ cm}$

- Rectangle: side length 5 cm, perimeter box cm
- Rhombus: side length 9 cm, perimeter box cm
- Triangle: side length 4 cm, perimeter box cm
- Hexagon: side length 8 cm, perimeter box cm
- Octagon: side length 9 cm, perimeter box cm

Encuentra el perímetro de cada sección sombreada. Cada bloque tiene 1 unidad cuadrada (u^2)

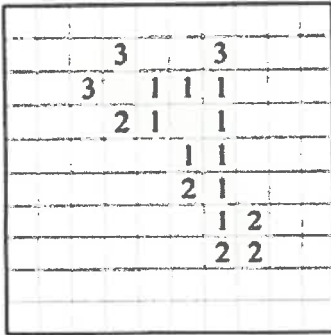


Suma las
bordes :
26



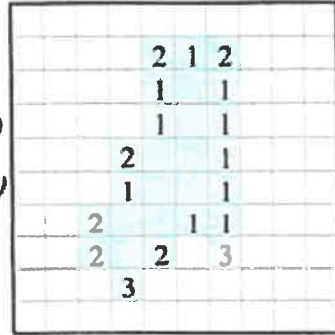
Encuentra el perímetro de cada sección sombreada. Cada bloque tiene 1 unidad cuadrada (u²)

1)

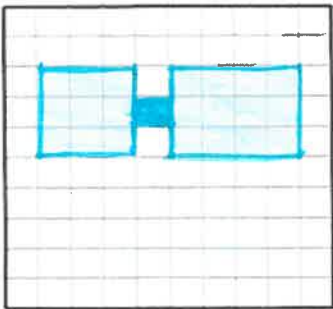


Suma todos los bordes exteriores

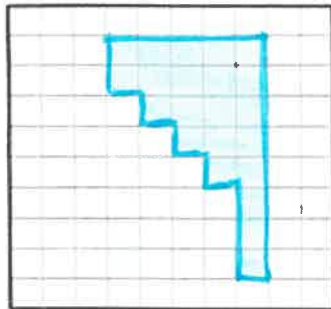
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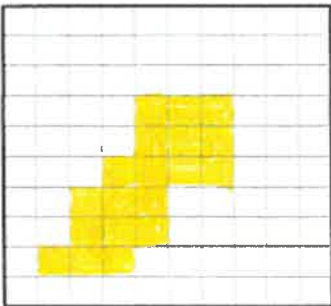
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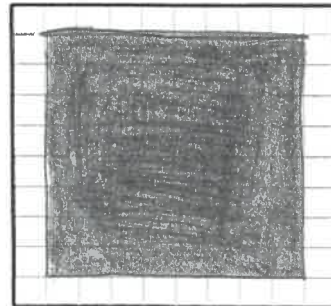
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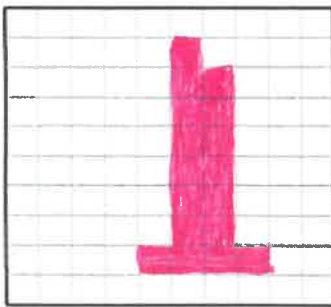
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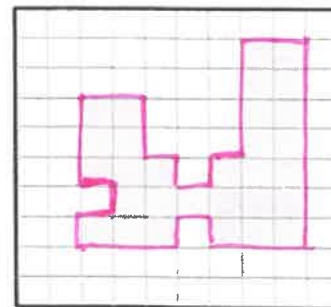
6)



7)



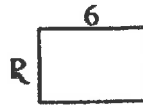
8)



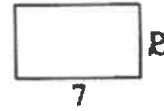
1) Perímetro = 24



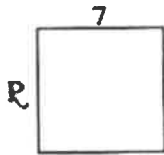
2) Perímetro = 20



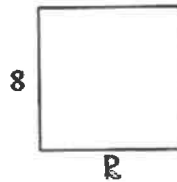
3) Perímetro = 22



4) Perímetro = 28



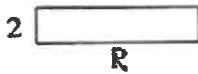
5) Perímetro = 32



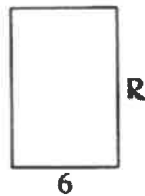
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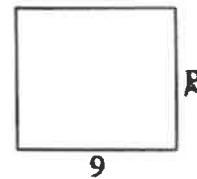
7) Perímetro = 22



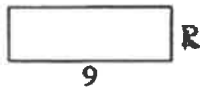
8) Perímetro = 30



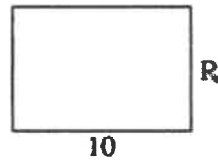
9) Perímetro = 34



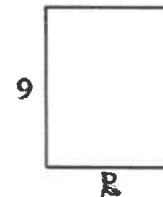
10) Perímetro = 24



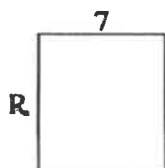
11) Perímetro = 34



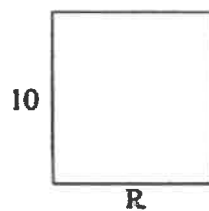
12) Perímetro = 32



13) Perímetro = 30



14) Perímetro = 38

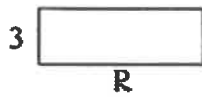


15) Perímetro = 12



Determina el valor de "R"

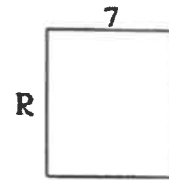
1) Perímetro = 24



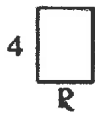
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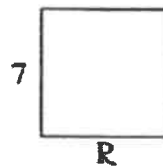
3) Perímetro = 30



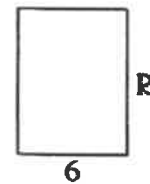
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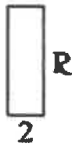
5) Perímetro = 28



6) Perímetro = 28



7) Perímetro = 16



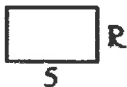
8) Perímetro = 20



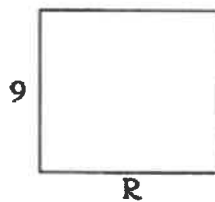
9) Perímetro = 12



10) Perímetro = 16



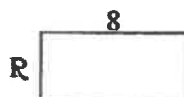
11) Perímetro = 38



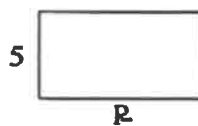
12) Perímetro = 20



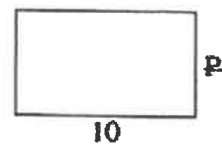
13) Perímetro = 24



14) Perímetro = 28

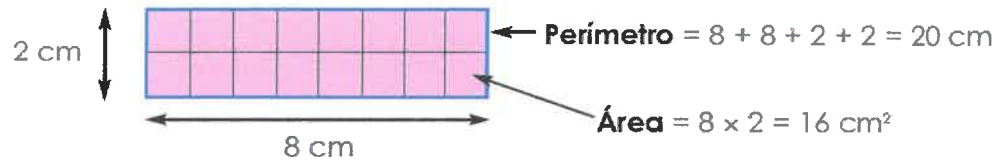


15) Perímetro = 32

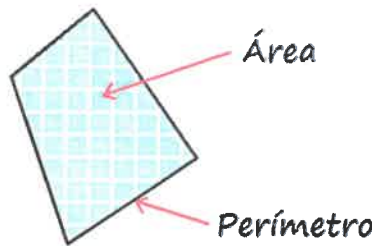


Área De Paralelogramos

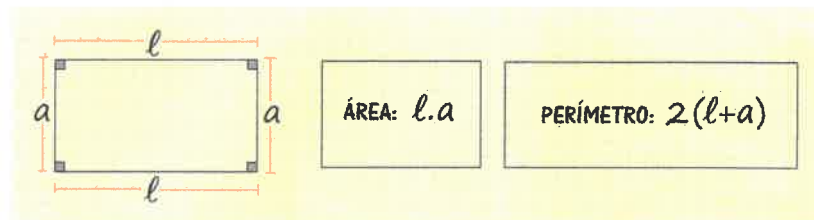
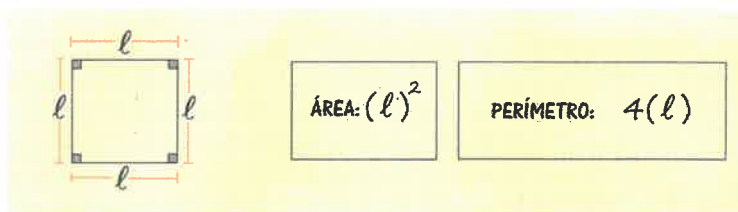
El **área** es la medida de la superficie que abarca una figura. Para calcular el área de una figura hay que determinar la cantidad de unidades de superficie que caben en su interior. Ejemplos de unidades de superficie son el **cm²**, el **m²** y el **km²**.



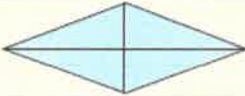



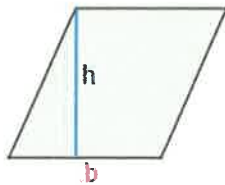
Diferencia Entre EL Perímetro y EL Área



¿Cómo Se Calcula EL Área?
 Área = Base x Altura



<u>Paralelogramo</u>	<u>Nombre</u>	<u>Área</u>
	cuadrado	lado · lado
	rectángulo	base · altura
	rombo	$\frac{\text{Diagonal} \cdot \text{diagonal}}{2}$
	romboide	base · altura



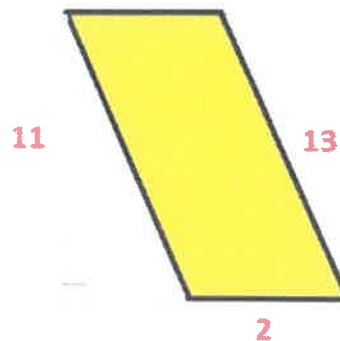
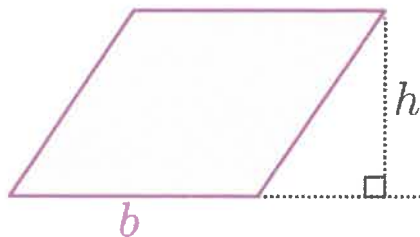
Para calcular el **área** de un **paralelogramo**, hay que conocer la longitud de la altura relativa a uno de sus lados.

Sea la base el lado b y la altura (h) relativa a la base. El **área** del **paralelogramo** es el producto de la base y la altura.

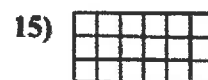
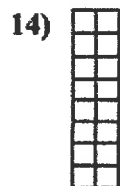
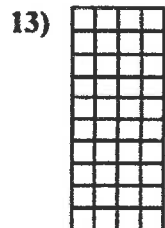
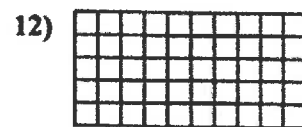
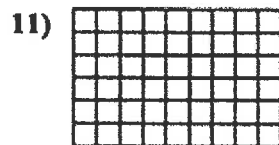
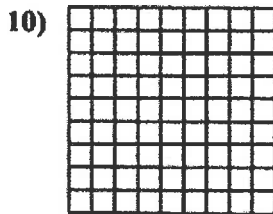
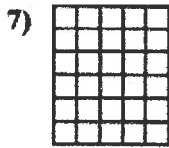
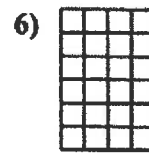
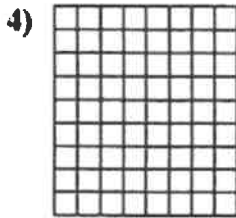
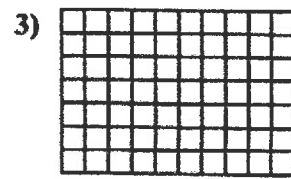
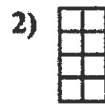
$$\text{Área} = b \cdot h$$

siendo b la base y h la altura relativa a la base

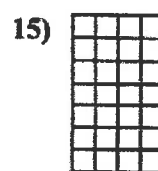
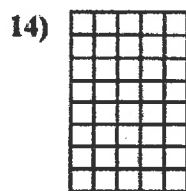
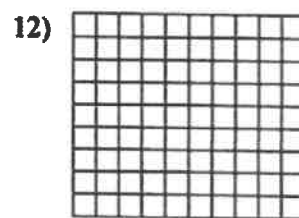
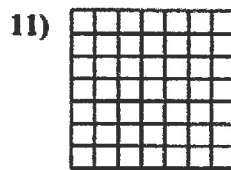
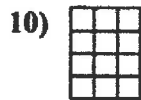
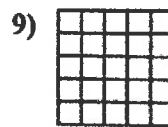
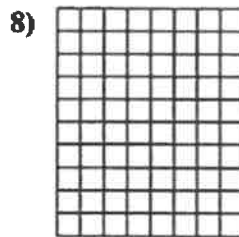
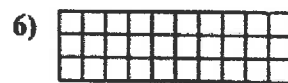
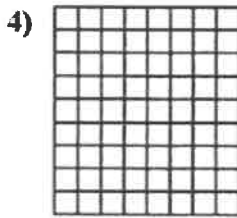
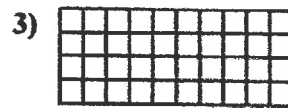
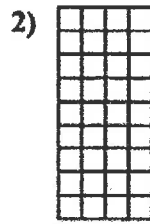
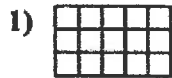
Importante: La base y la altura son perpendiculares la una a la otra



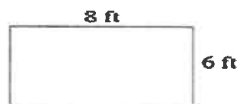
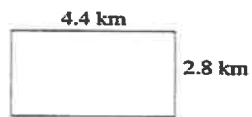
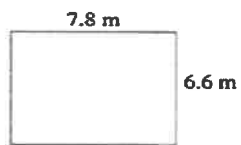
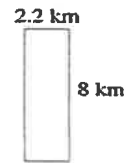
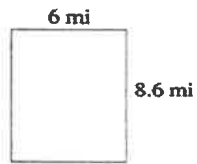
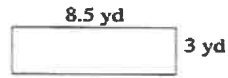
Determina el área. Cada $\square = 1$ unidad (u^2)



Determina el área. Cada $\square = 1$ unidad (u^2)

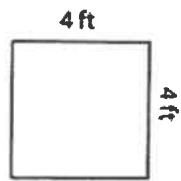


Halle el área y el perímetro de cada rectángulo.



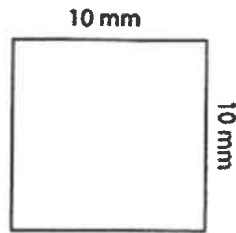
Calcula el área de cada cuadrado

1)



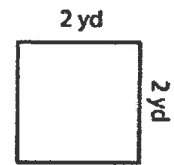
Area =

2)



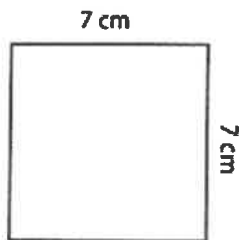
Area =

3)



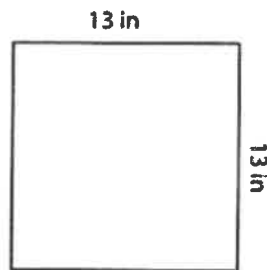
Area =

4)



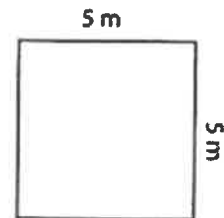
Area =

5)



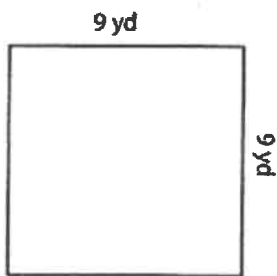
Area =

6)



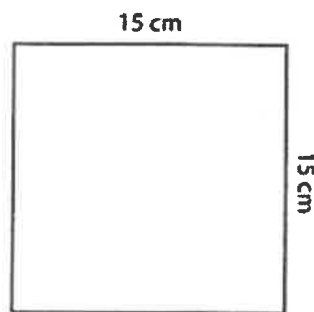
Area =

7)



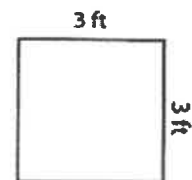
Area =

8)



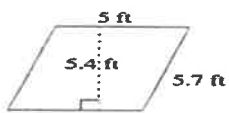
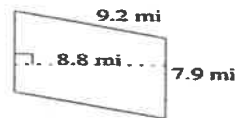
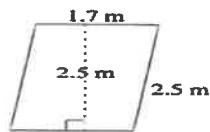
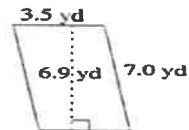
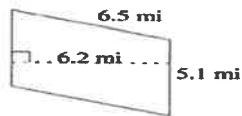
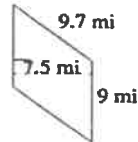
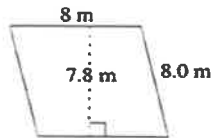
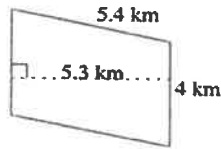
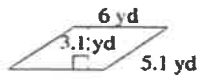
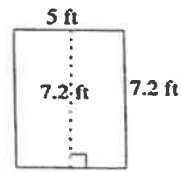
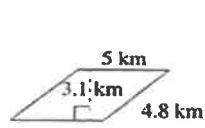
Area =

9)

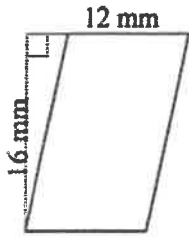


Area =

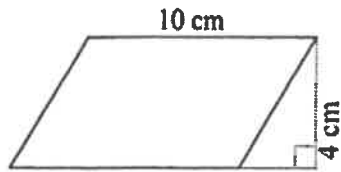
Halle el área y el perímetro de cada paralelogramo.



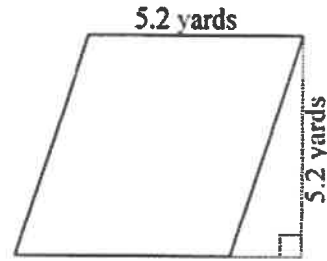
13) $A =$ _____



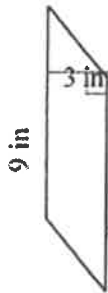
14) $A =$ _____



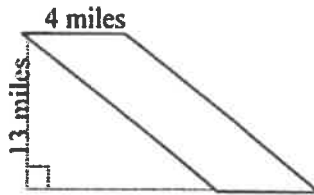
15) $A =$ _____



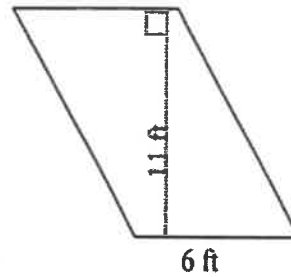
16) $A =$ _____



17) $A =$ _____



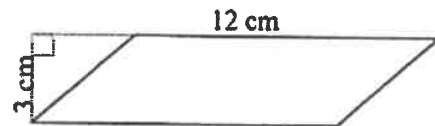
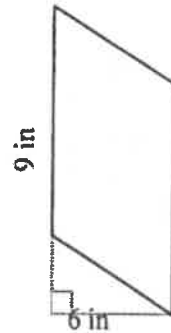
18) $A =$ _____



19) $A =$ _____

20) $A =$ _____

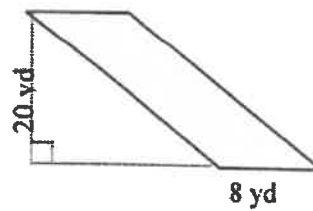
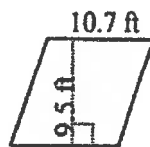
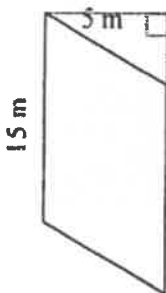
21) $A =$ _____



22) $A =$ _____

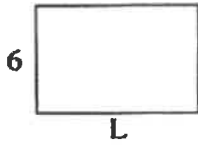
23) $A =$ _____

24) $A =$ _____

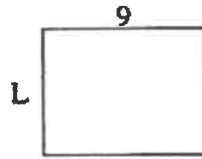


Determina el valor de "L"

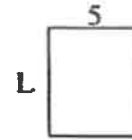
1) Área = 54 u^2



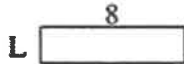
2) Área = 63 u^2



3) Área = 30 u^2



4) Área = 16 u^2



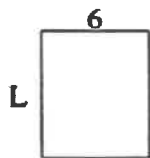
5) Área = 30 u^2



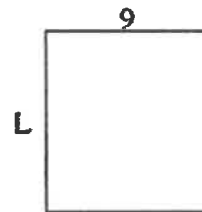
6) Área = 21 u^2



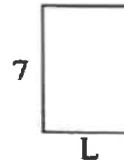
7) Área = 42 u^2



8) Área = 90 u^2



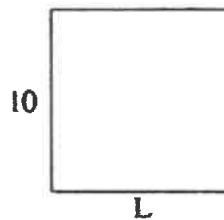
9) Área = 35 u^2



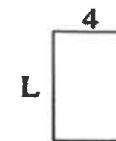
10) Área = 6 u^2



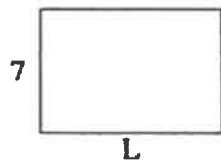
11) Área = 100 u^2



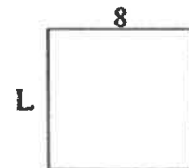
12) Área = 24 u^2



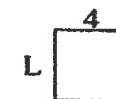
13) Área = 70 u^2



14) Área = 64 u^2

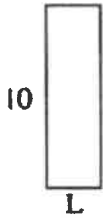


15) Área = 16 u^2



Determina el valor de "L"

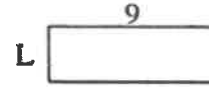
1) Área = $30 u^2$



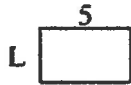
2) Área = $4 u^2$



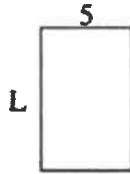
3) Área = $27 u^2$



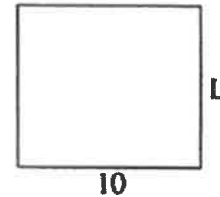
4) Área = $15 u^2$



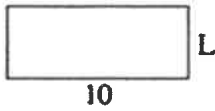
5) Área = $40 u^2$



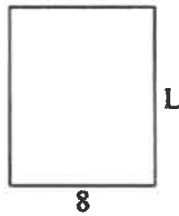
6) Área = $90 u^2$



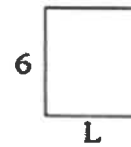
7) Área = $40 u^2$



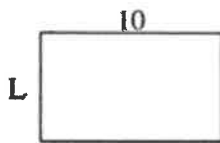
8) Área = $80 u^2$



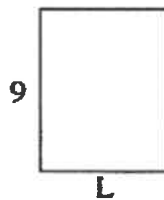
9) Área = $30 u^2$



10) Área = $60 u^2$



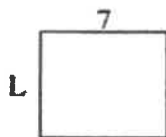
11) Área = $63 u^2$



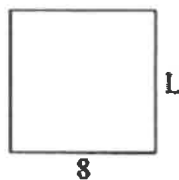
12) Área = $21 u^2$



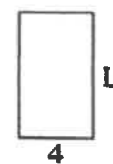
13) Área = $42 u^2$



14) Área = $64 u^2$

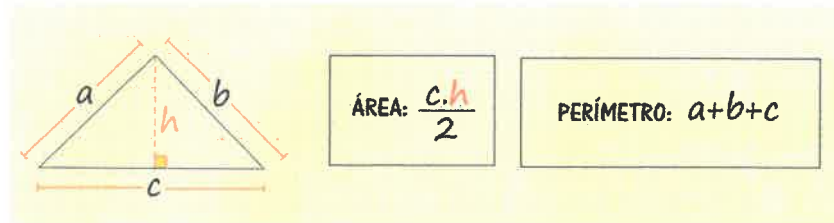
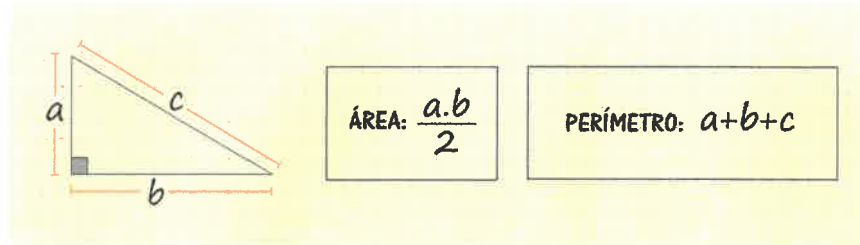


15) Área = $28 u^2$

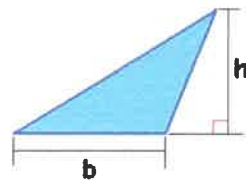


Área De Un Triángulo

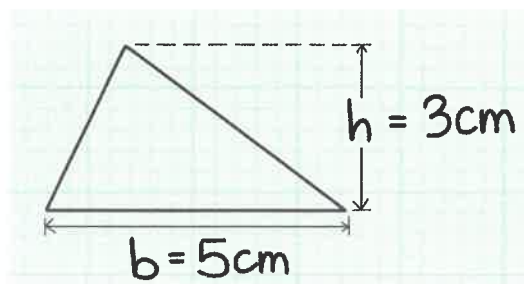
$$A = \frac{b \times h}{2}$$



Observa los siguientes triángulos. La altura siempre es perpendicular a la base. No olvide, ¡la altura es el punto más alto!

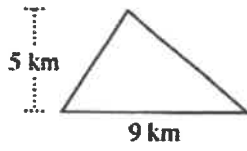


$$\text{Area Triángulo} = \frac{b \cdot h}{2}$$

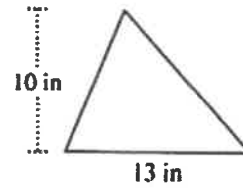


Encuentra el área de cada triángulo. Las unidades no están a escala.

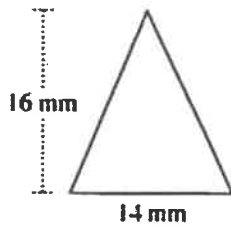
1)



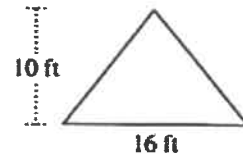
2)



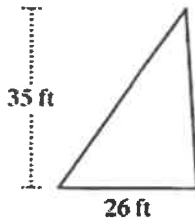
3)



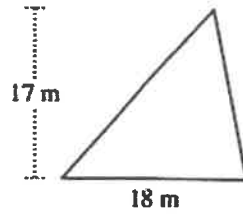
4)



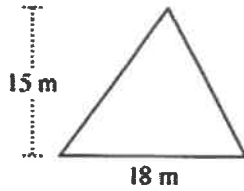
5)



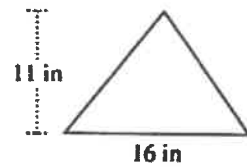
6)



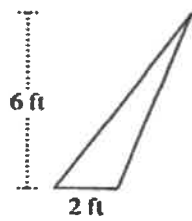
7)



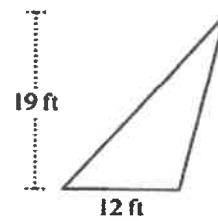
8)



9)

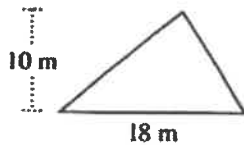


10)

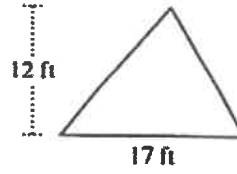


Encuentra el área de cada triángulo. Las unidades no están a escala.

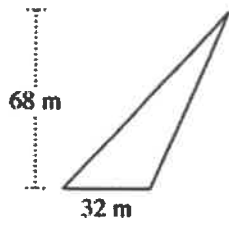
1)



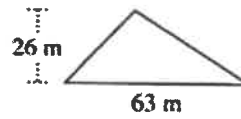
2)



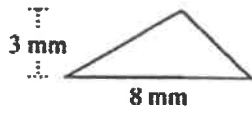
3)



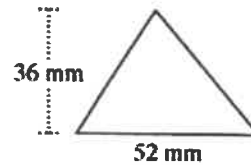
4)



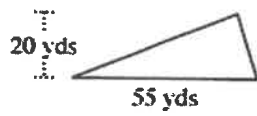
5)



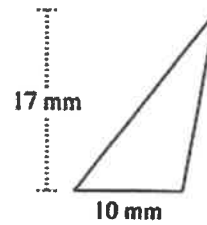
6)



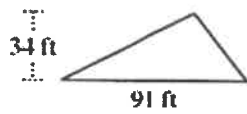
7)



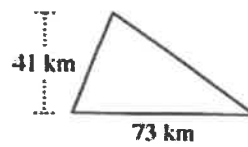
8)



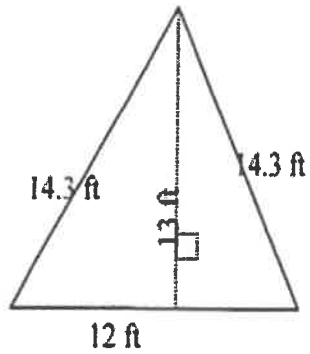
9)



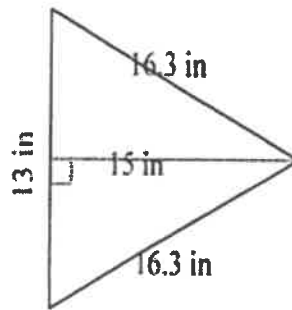
10)



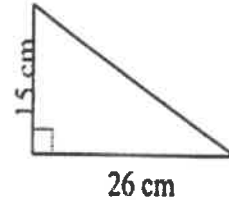
4) $A =$ _____



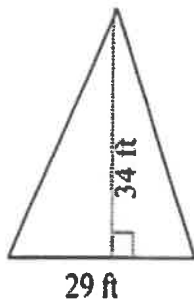
5) $A =$ _____



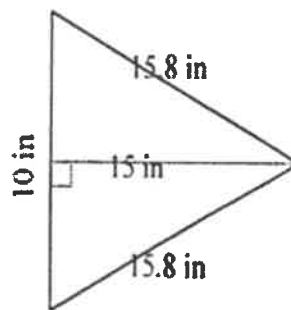
6) $A =$ _____



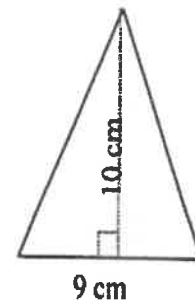
7) $A =$ _____



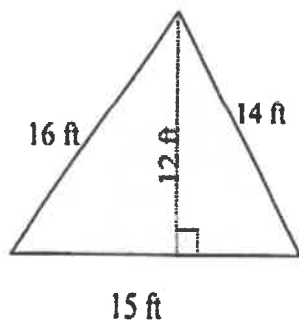
8) $A =$ _____



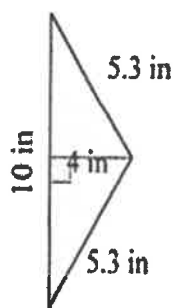
9) $A =$ _____



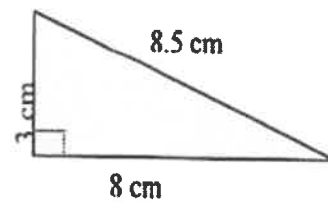
10) $A =$ _____



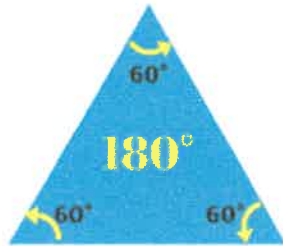
11) $A =$ _____



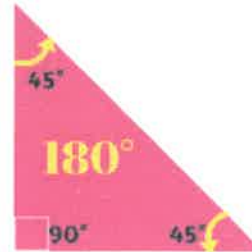
12) $A =$ _____



La suma de los ángulos internos de cualquier triángulo es 180°



$$60^\circ + 60^\circ + 60^\circ = 180^\circ$$



$$45^\circ + 90^\circ + 45^\circ = 180^\circ$$

Halla el valor de x en cada triángulo.

