
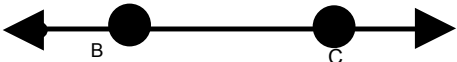



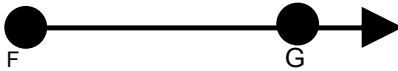

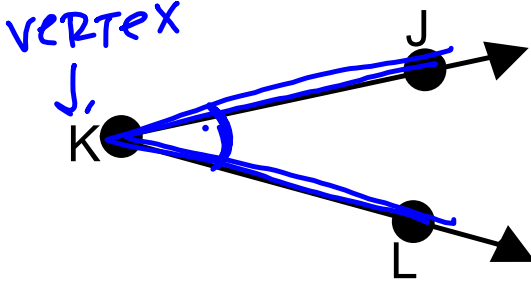
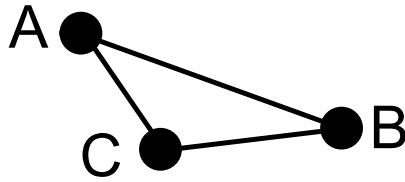


10-1 Definitions, Area, Perimeter

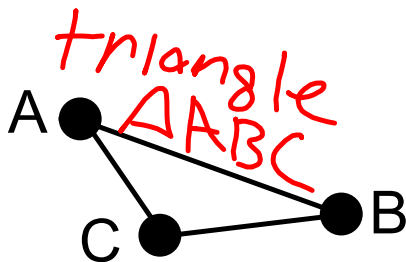
Objectives:

-I can define the following vocabulary words: point, line, line segment, angle, ray and triangle.

I can calculate the area and perimeter of rectangles and triangles.

Vocabulary	Drawing	Notation
Point:		$\cdot A$
Line:		
Line segment:		
Ray:		
Angle:		$\angle K$ $\angle JKL$ $\angle LKJ$
Triangle		$\triangle ABC$ $\triangle CBA$ $\triangle BAC$

Label each drawing with the correct vocabulary word and notation

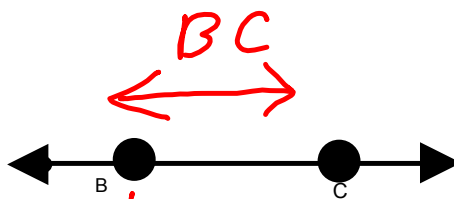


triangle
 $\triangle ABC$



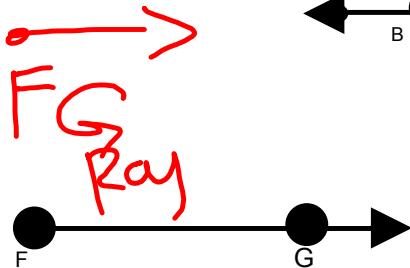
\overline{DE}

line segment



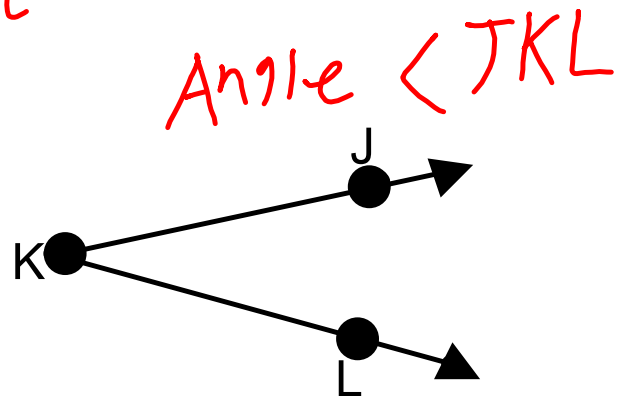
\overleftrightarrow{BC}

LINE



\overrightarrow{FG}

Ray



Angle $\angle JKL$

point
C • C

Area vs. Perimeter

1. On your paper draw and label the following rectangles with the following lengths:

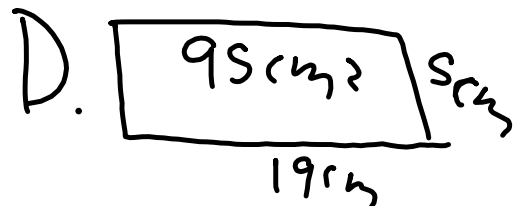
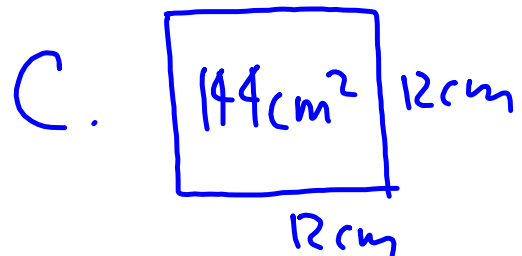
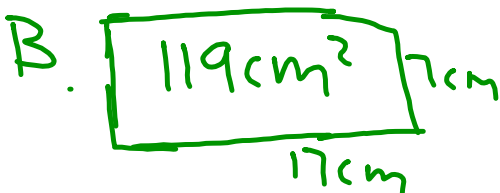
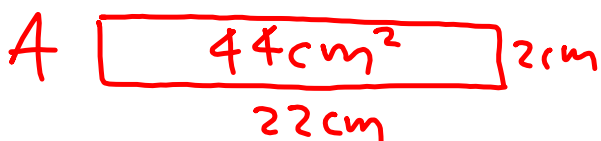
A: length 22cm width 2cm B: length 17cm width 7cm

C: length 12cm width 12cm D: length 19cm width 5cm

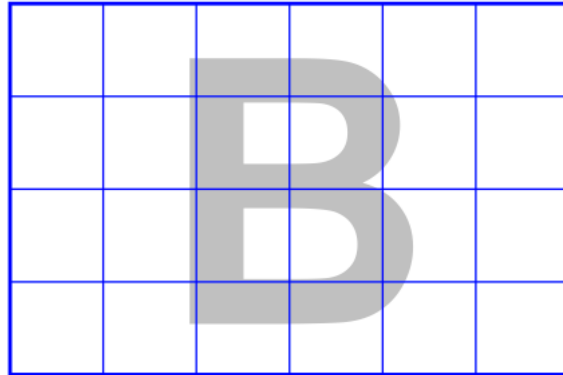
2. Find and label the perimeter of each rectangle

A: 48cm B: 48cm C: 48cm D: 48cm

3. What do all the rectangles have in common? How are they different?



Area vs. Perimeter



Area

Space inside

CM²

M²

in²

Perimeter

length around

CM

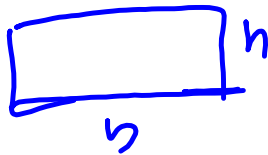
M

in

Area

Perimeter

Rectangle



$$A = b \cdot h$$

OR
 $l \cdot w$

$$P = 2b + 2h$$

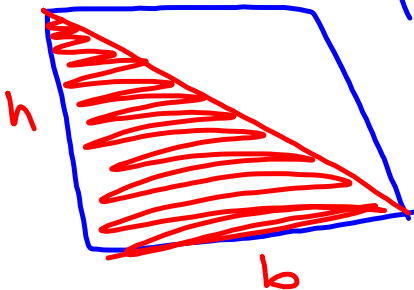
Square



$$A = s^2$$

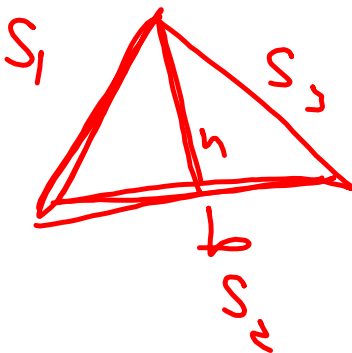
$$P = 4s$$

Triangle

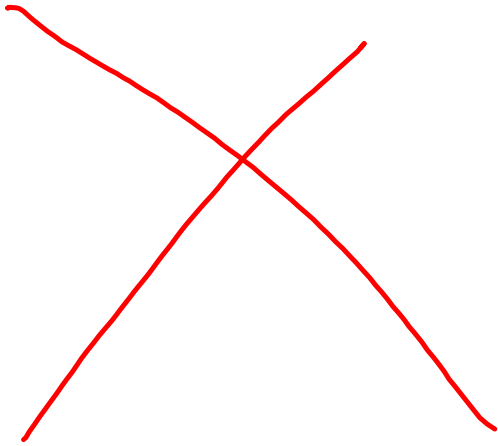


$$A = \frac{1}{2} b \cdot h$$

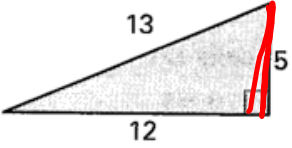
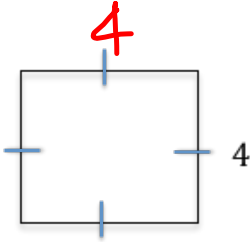
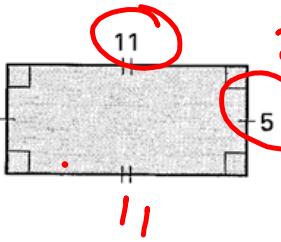
$$P = s_1 + s_2 + s_3$$



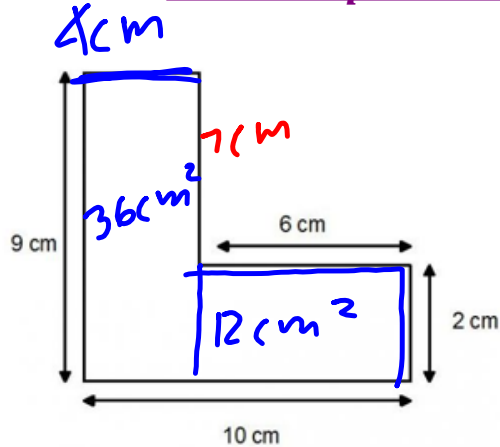
Create a trapezoid using two triangles and a rectangle. What is the area and perimeter of the trapezoid?



Find the area and perimeter of the figure.

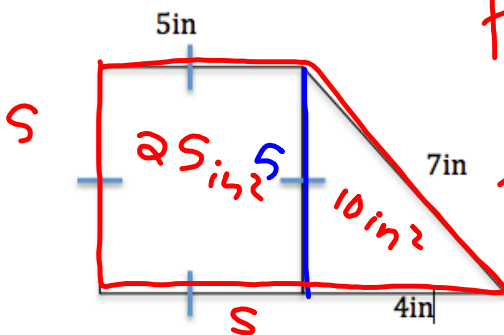
	<u>PERIMETER</u>	<u>AREA</u>
a.	 $13 + 5 + 12$ 30	$.5 \cdot 12 \cdot 5$ 30
b.	 16	16
c.	 $22 + 10$ 32	55

Find the area and perimeter of the figure.



$$P = 38 \text{ cm}$$

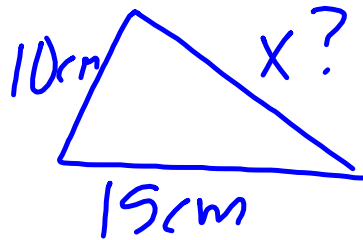
$$A = 36 + 12 = 48 \text{ cm}^2$$



$$P = 26 \text{ in}$$

$$A = 25 + 10 = 35 \text{ in}^2$$

What is the length of the third side of a triangle if one side measures 10cm, the second measures 15 cm and the perimeter is 45cm?



$$10 + 15 + x = 45$$

$$25 + x = 45$$

$$\begin{array}{r} -25 \\ -25 \end{array}$$

$$x = 20\text{cm}$$

If the area of a rectangle is 60 cm^2 and its width is 6 cm.

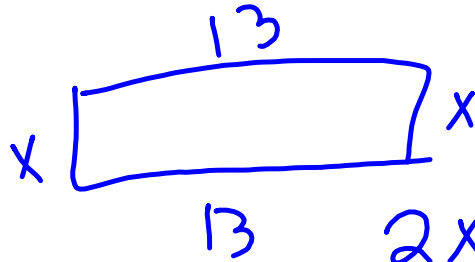
What is its length?

$$A = l \cdot w$$

$$\frac{60}{6} = \frac{l \cdot 6}{6}$$

$$10\text{cm} = l$$

What is the width of a rectangle if the length is 13in and the perimeter is 40in?



$$\begin{aligned}
 2x + 2b &= 40 \\
 -26 &\quad -26 \\
 \hline
 2x &= 14 \\
 x &= 7 \text{ in}
 \end{aligned}$$

If the area of a triangle is 20cm^2 and the base is 5cm, find the height.

$$A = \frac{1}{2} \cdot b \cdot h$$

$$20 = \frac{1}{2} \cdot 5 \cdot h$$

$$\frac{20}{2.5} = \frac{2.5}{2.5} \cdot h$$

$$8 \text{ cm} = h$$