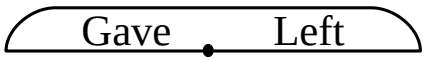
Lesson № 17

1 **Write the expressions for the word problems:**

A. Hannah had ***a*** stickers. She gave ***b*** stickers to each of her ***c*** friends. How many stickers does she have left?



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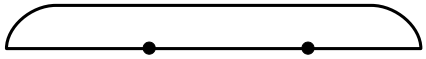
B. Jenny saved ***a*** dollars this week. She saved 3 times as much last week and 4 times less the week before. How much money does she have?



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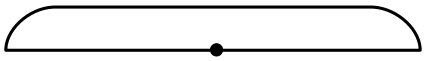
C. Lilly types 20 pages in one hour. Jane who is more experienced types 25 pages in an hour. How many pages can they both type in 3 hours?



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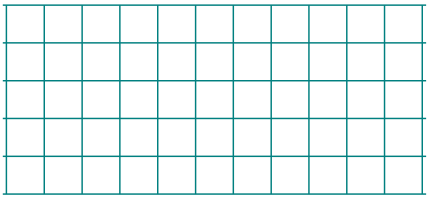
D. Lilly types ***x*** pages in one hour. Jane types ***b*** pages in an hour. How many pages can they both type in ***t*** hours?



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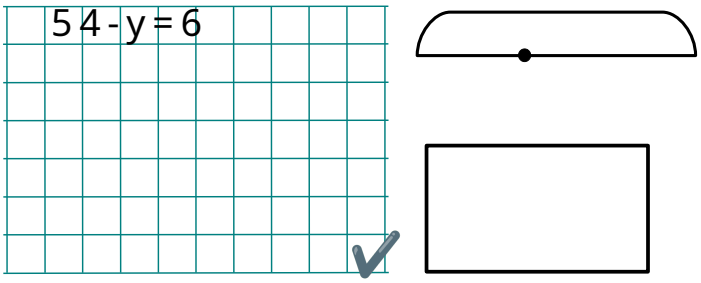
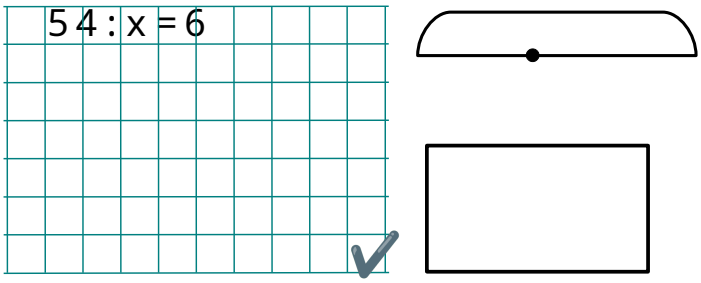
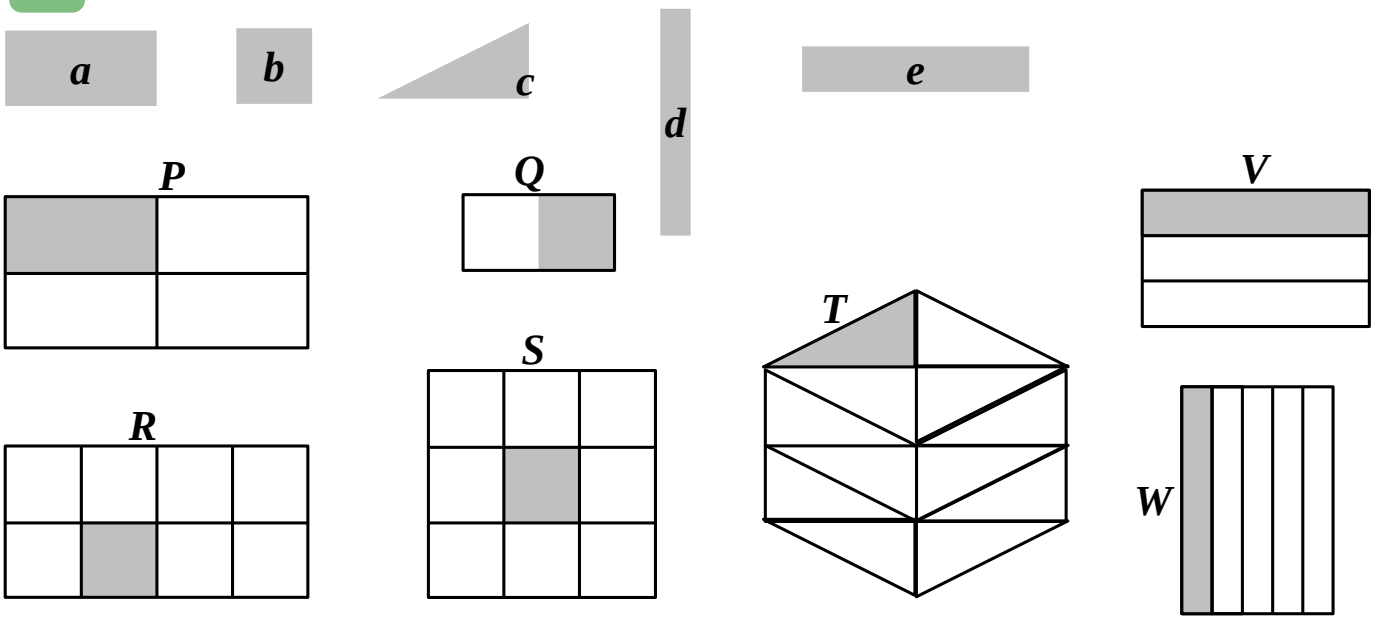
2 Solve equations:





Measures and Fractions of Areas:

3



$P = 4a$ $a = \frac{1}{4} P$	$Q = \square\, b$ $b = Q$	$R = \square\, b$ $b = R$	$S = \square\, b$ $b = S$	$T = \square\, c$ $c = T$

$V = \square\, e$ $e = V$	$W = \square\, d$ $e = W$

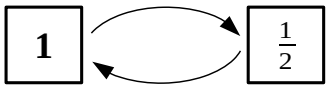
To find one ***n***-th fraction of a number or any other object this object has to be divided into ***n*** equal parts.

For example:

One of the ways to find one ***n***-th fraction of a rectangle is to cut it into ***n*** equal strips.

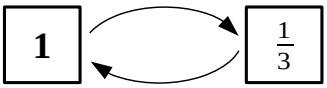
4

1 : 2 =



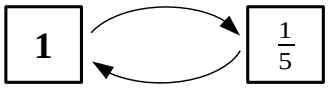
$\frac{1}{2} \times 2 =$

1 : 3 =



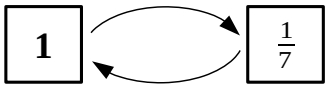
$\frac{1}{3} \times 3 =$

1 : 5 =



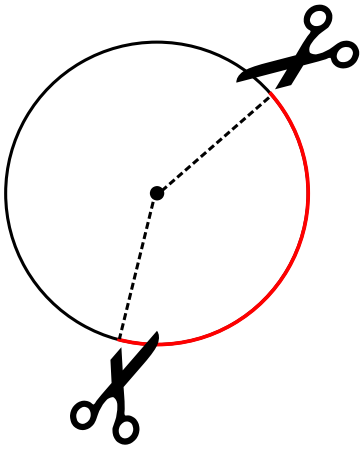
$\frac{1}{5} \times 5 =$

1 : 7 =

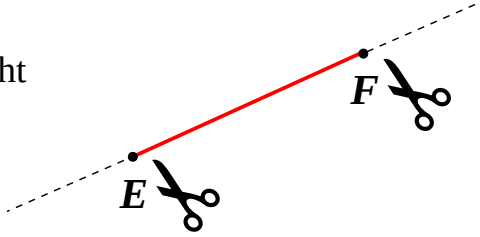


$\frac{1}{7} \times 7 =$

Arks: subsets of circles.



A subset of points of a straight line limited by two points is called a line segment.

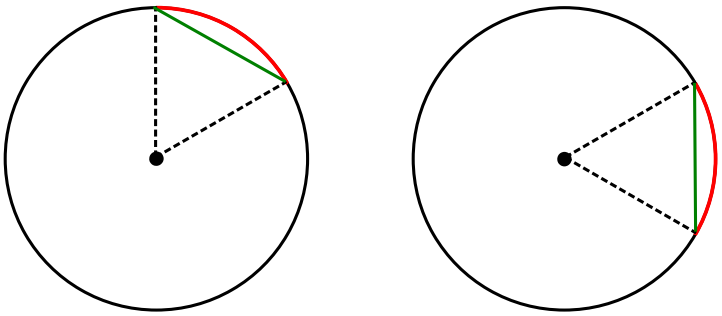


A subset of points of a circle limited by two points is called an ark.

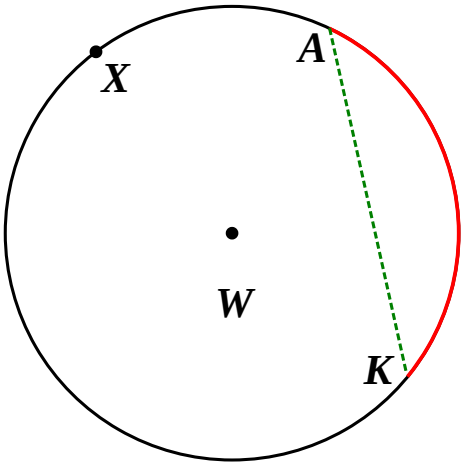
Protractors use sizes of arks as measures of the corresponding angles.

A line segment connecting the ends of an ark is called a ***chord***

Equal arks of the same circle are connected by equal chords.



5 Find point ***Z*** such that the ark limited by points ***X*** and ***Z*** is equal to the ark limited by points ***A*** and ***K*** (red).



Remember, $|XZ| = |AK|$!

1. _____

2. _____

3. _____

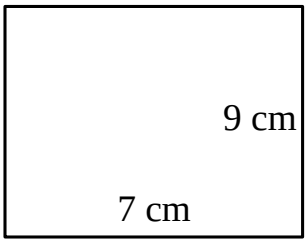
Measure angles and compare

$\angle AWK$ = _____ $\angle XWZ$ = _____ $\angle AWK$ ☐ $\angle XWZ$

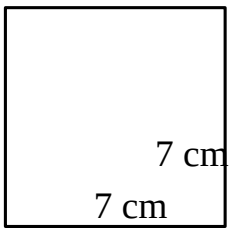
Perimeter:

Perimeter of a polygon is the sum of the lengths of ***all*** its sides.

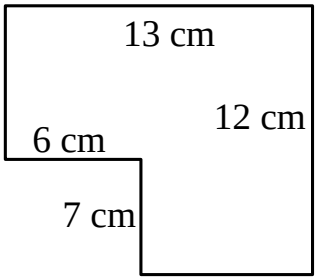
6 Calculate "missing sides" where needed to find perimeters of these shapes:



P =

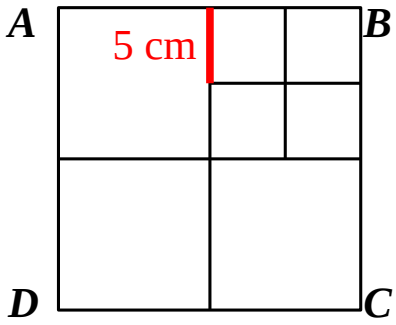


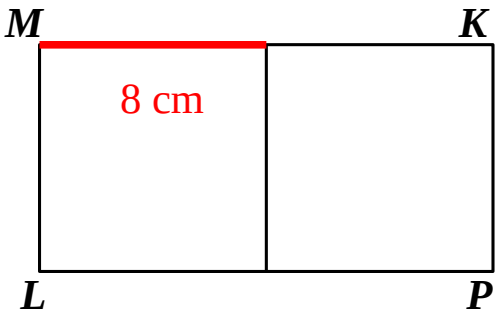
P =



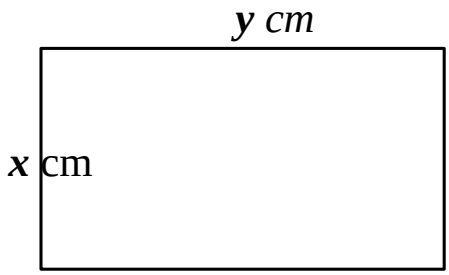
P =

7 Calculate the perimeter of the square ***ABCD*** and the rectangle ***MKPL*** if you know the length of the red side and that both shapes consist only of squares.

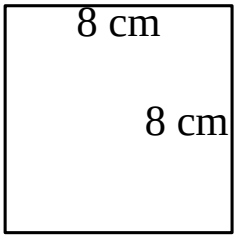


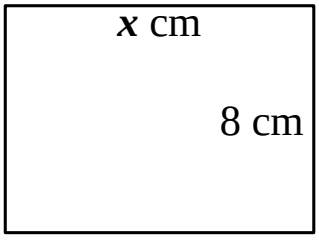


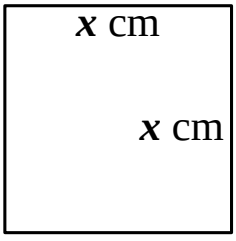
8 Write the expressions for the perimeter of given rectangles:



P = _____







P = _____ P = _____ P = _____

9 **Solving equations via replacement:**

72 : (x – 2) = 9

z = x - 2

72 : z = 9

z = 72 : 9

z = 8

z = x - 2

x - 2 = 8

x = 8 + 2

x = 10

72 :(10 - 2) =

= 72 : 8 = 9 ✔

72:(x – 2)=9 → z = x - 2 →

1. Simplify the original equation
2. Solve the simplified equation
3. Go back to the original unknown
4. Check your answer

72–(8 : x) = 68

72–(8 : x)= 68 → z =

10 The price of each buss connection is plotted on the map. Help Foxy tail to find the cheapest way to his friend.