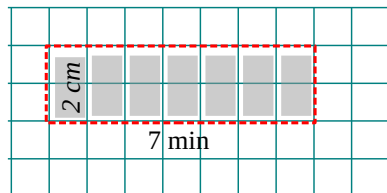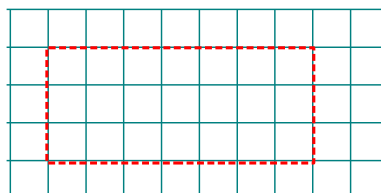# Homework for Lesson № 8

1 Write expressions to solve the word problems and evaluate them where possible:
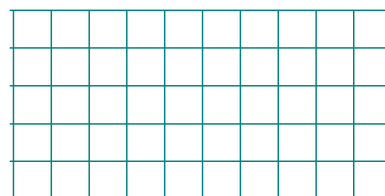
A snail crawls 2 cm every minute. How far will it crawl in 7 min?

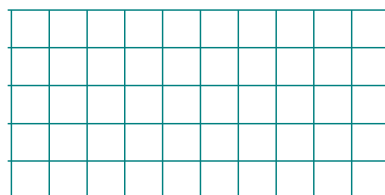_____

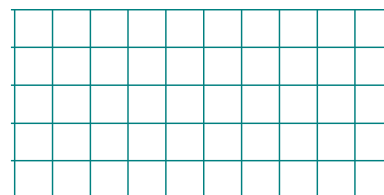A snail crawls **v** cm every minute. How far will it crawl in 12 min?

_____

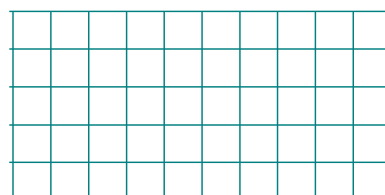A snail crawls **v** cm every minute. How far will it crawl in **t** min?

_____

A snail crawls 3 cm every minute. How long will it take for it to crawl 21 cm?

_____

A snail crawls 3 cm every minute. How long will it take for it to crawl **d** cm?
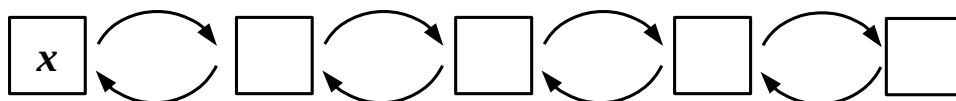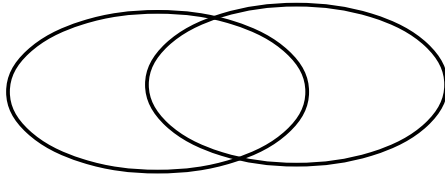
_____

A snail crawls **v** cm every minute. How long will it take for it to crawl **d** cm?

_____

2 Analyze the operations and undo them to solve the equation:

$$x \times 5 \div 3 \div 2 = 5$$

$x =$

$x =$

3 Place a total of 4 elements (dots) into each Venn Diagram below to yield…

a). … 3 elements in each set

> **Make sure, there are exactly 4 dots in each Venn Diagram!**

b). … 2 elements in one set and 3 in the other
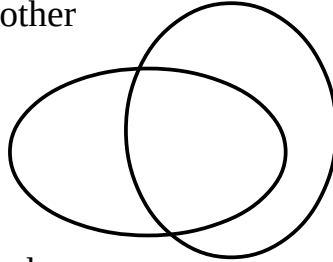
c). … 4 elements in one set and 3 in the other

d). … 0 elements in one set and 4 in the other

Here only 5 elements yield 5 elements in each set.

e). … 4 elements in each set

f). … 2 elements in each set
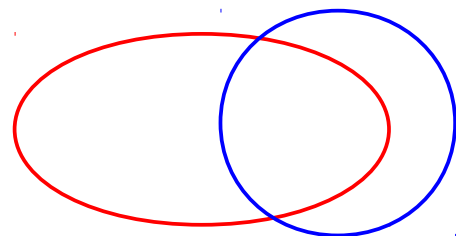
Can you distribute 5 elements to make 4 in one and 5 in the other?

4 Fill in the tables
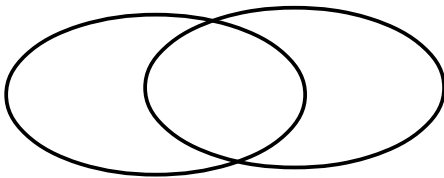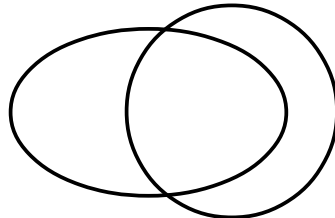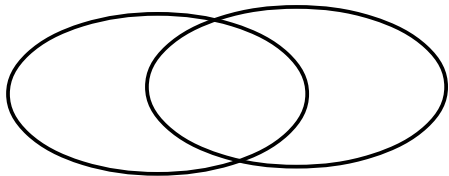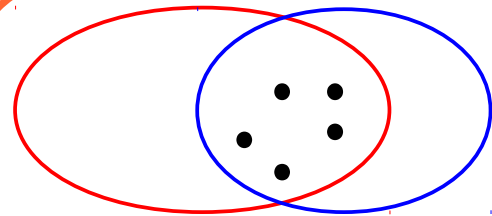
x	123	625		419		236	76
y	99		167	192	374		287
$x + y$		702	298		429	509	

x	234	625		419		236	276
y	99		167	192	374		109
$x - y$		223	298		429	83	

x	56	36	63		72	42	35
y	8		7	4			7
$x \div y$		4		7	9	6	

x	7		9	4			6
y		5		8	3	6	
$x \times y$	56	25	63		27	18	42

5 Use rectangle diagrams to solve the following equations for x:

$w \times x = 24$ $g \div x = m$ $32 = x \times 8$ $x \div y = z$

$x = $ _____ $x = $ _____ $x = $ _____ $x = $ _____

6 Compare:

$a \times 3 - a \times 2 \,\square\, a \times 2$ $w - (5 + 10) \,\square\, w - 5 - 10$ $q \div 10 \,\square\, q \div 20$

$m \times 5 + m \times 2 \,\square\, m \times 7$ $b - (3 + 8) \,\square\, b - 3 + 8$ $a \times 1 \,\square\, a \times 0$

7 **In your notebook** mark the order of operations and write the programs to calculate the expressions below:

a). $q - 12 \times z + 6$ *b*). $q - 12 \times (z + 6)$ *c*). $(q - 12) \times (z + 6)$

8 **In your notebook** use rectangle diagrams to solve the following equations. Copy your answers here.

$y \times 8 = 64$ $z \div 9 = 4$ $7 \times x = 56$ $54 \times w = 6$

$y =$ _____ $z =$ _____ $x =$ _____ $w =$ _____

9 Set **M** = {a, ☐},   set **K** = {m, 4}, set **D** = {a, m, ☐, ★}

Draw a Venn Diagram for these sets.

Use you diagram to fill in the blanks below with symbols ⊂ and ⊄:

M … **D**   **K** … **D**

10 Fill in the blanks with one of the symbols ∈, ∉, ⊂, ⊄ according to the drawing:

P … *QR*   *P* … [*QR*]   *P* … [*QR*)

[*RT*] … *PR*   *Q* … [*TR*)   [*RQ*] … *RT*
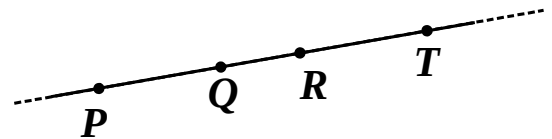
[*QR*) … *QR*   [*RQ*) … *PT*   [*QR*) … [*RQ*)

11 Check ✔ the TRUE statements; cross mark ✗ the FALSE statements.

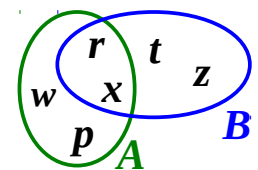☐ $x \in A \cap B$ ☐ $r \notin A \cap B$ ☐ $z \in A \cap B$

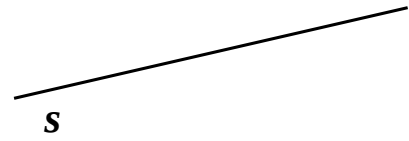☐ $\{r, t\} = A \cap B$ ☐ $A \cap B \in A$ ☐ $A \cap B \in B$

12 *a).* Mark a point on the straight line *s*.

How many rays do you see? _____

s

Mark 2 points on line *q*.

How many rays do you see? _____

q

Mark 3 points on line *w*.

How many rays do you see? _____

w

Mark 4 points on line *m*.

How many rays do you see? _____

m

13 Fill in the table

# of points marked	1	2	3	4	10	*x*
# of rays produced						

14 A raft evenly drifts downstream. It moved 42 km in 6 hours. How far did it move in 5 hours?
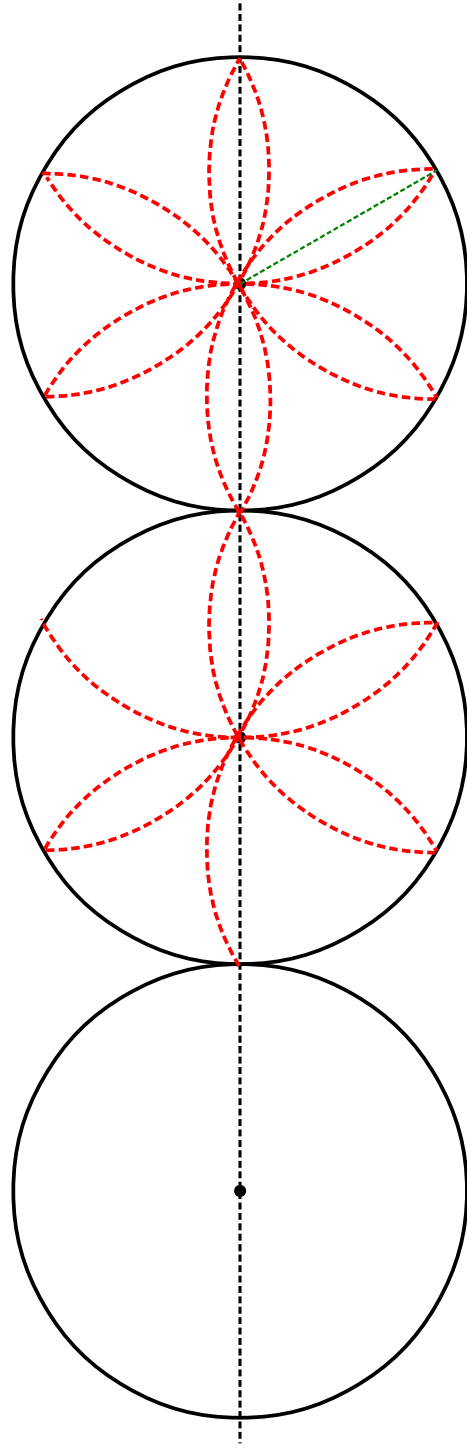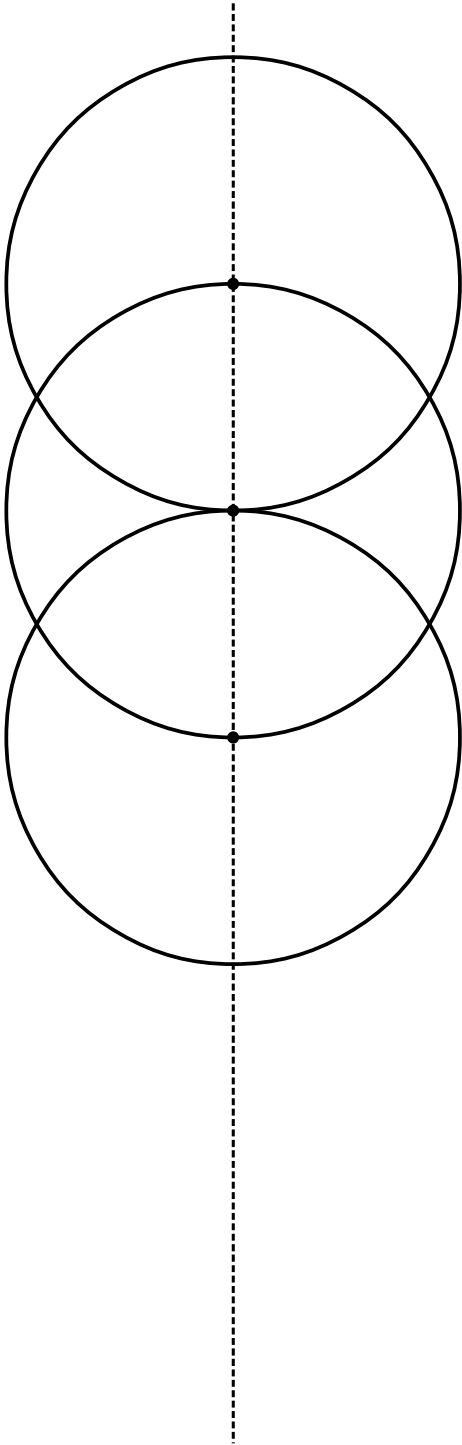
1. _____

2._____

A train moves 28 km in seven minutes. How long does it take to travel 63 km?

1. _____

2._____

15 Use a compass to continue the patterns:

16 Cat Island, where the brothers are stuck, has 6 towns: **A**, **B**, **C**, **D**, **E**, and **F**.

Every town is connected to two closest towns by roads. Say, town **A** is connected to towns **B** and **F**.

Also there are roads directly connecting towns **A** and **D**, and towns **B** and **F**.
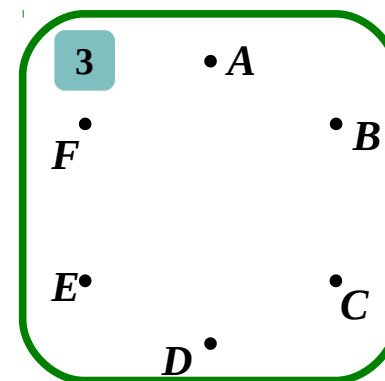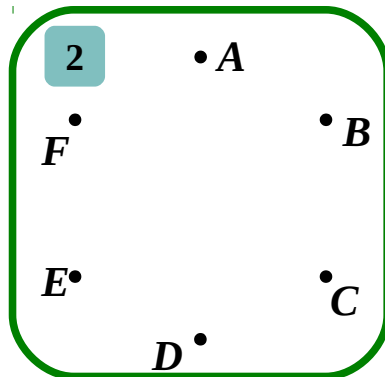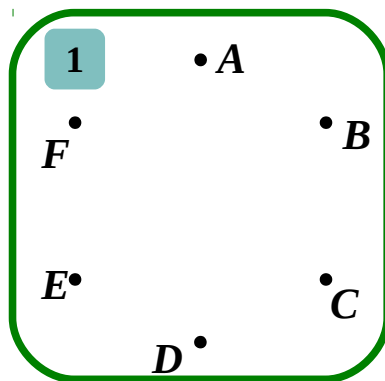
Plot these roads on the graph **1**.

Orange cats use bus #1 that begins and ends at the town **A** and skips only towns **E** and **F**.
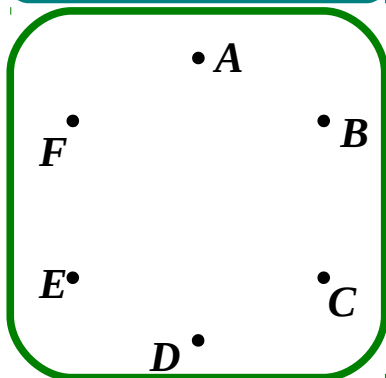
Plot the route of the bus #1 on the graph **2**.

Purple cats use bus #2 that begins and ends at the town **C** and skips only town **A**.
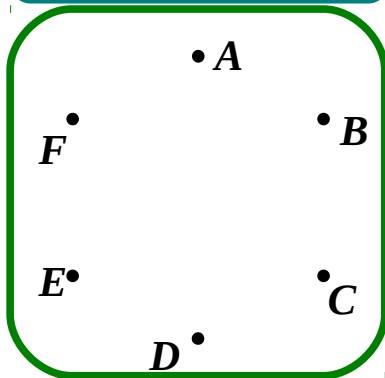
Plot the route of the bus #2 on the graph **3**.

1

    • *A*

F •   • *B*

E•   • *C*

    D •

2

    • *A*

F •   • *B*

E•   • *C*

    D •

3

    • *A*

F •   • *B*
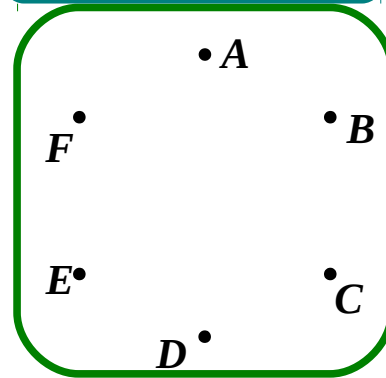
E•   • *C*

    D •

Complete the graphs below:

| Roads that both orange and purple cats use. | Roads that either orange or purple cats use. | Roads that orange cats do not use. |

    • *A*   • *A*   • *A*

F •   • *B*   *F* •   • *B*   *F* •   • *B*

E•   • *C*   *E*•   • *C*   *E*•   • *C*

    D •   *D* •   *D* •

17 A bug is sitting on the object's face that we cannot see from this angle. Color that face yellow.