Homework for Lesson № 11

1 Make you own auxiliary drawings needed to solve the word problems:

A raft drifts 40 km in 5 hours. How far will it drift in 8 hours?
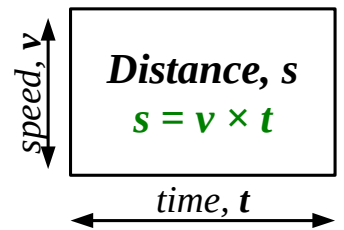
_____

A raft drifts 40 km in 5 hours. How far will it drift in **t** hours?

_____

A raft drifts 42 km in 7 hours. How long will it take to drift 36 km?

_____

A raft drifts 42 km in 7 hours. How long will it take to drift **s** km?

_____

* A raft drifts **d** km in **q** hours. How long will it take to drift **s** km?

$$\_\_\_v = _____$$

_____

speed, v

Distance, s
$s = v \times t$

time, t

2 Open parentheses using the distributive property of multiplication. Calculate where possible.

$3 \times (a + b) =$ _____

$5 \times (x + 5) =$ _____

$8 \times (10 + 2) =$ _____

$(x + y + 10) \times 2 =$ _____

3 Replace to simplify:

$72 \div y + 5 = 9$ ———— q = ————▶ [ ]

$x \times 3 + 5 = 17$ ———— f = ————▶ [ ]

4 A raft flows down the river.

The speed of the river flow is 4 kilometers per hour: $v = 4\ km/h$							
Time: t	1h	3h		6h		8h	
Distance: s			20 km		28 km		40 km

5 Multiply:

$$4\,3 \times 9$$

$$4\,2 \times 6$$

$$2\,9 \times 5$$

$$1\,9 \times 4$$

6 Solve the equation using the steps like the ones in the sample:

25
18   x : 5
$25 - x : 5 = 18$

$x : 5 = 25 - 18$

$x : 5 = 7$

$x = 7 \cdot 5$

$x = 35$

$25 - 35 : 7 = 18$ ✔

25
x:5
18

$w : 3 + 18 = 24$ ✔

7 Perform the conversions for the units of distance and area:

$2\ dm^2 =$ _____ cm^2

$3\ dm^2 =$ _____ cm^2

$5\ m^2 =$ _____ dm^2

$100\ dm^2 =$ _____ m^2

$11\ dm =$ _____ cm

$200\ dm^2 =$ _____ m^2

$500\ cm =$ _____ dm

$300\ dm^2 =$ _____ m^2

$20\ dm^2 =$ _____ cm^2

8 Use the sample in assignment **#6** to solve these equations **in your notebook**. Check your answers and copy them below. For each equation, make a diagram indicating the whole and its parts:

$w \cdot 7 - 6 = 22$ $z : 4 + 28 = 36$ $x : 3 - 17 = 19$
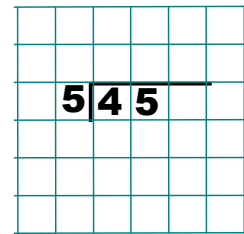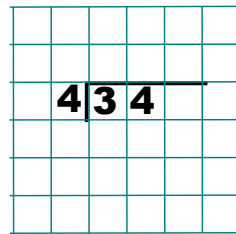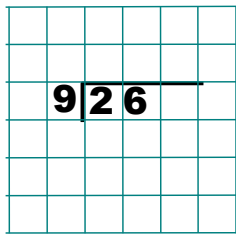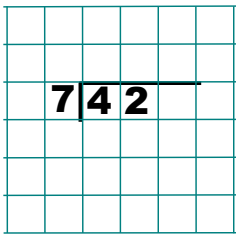
$w =$ _____ $z =$ _____ $x =$ _____

9 Divide with or without a remainder:

$7 | 4\ 2$ $9 | 2\ 6$ $4 | 3\ 4$ $5 | 4\ 5$

10 Move the shapes according to the instructions; label the moved vertexes as A_2, B_2, *etc*.
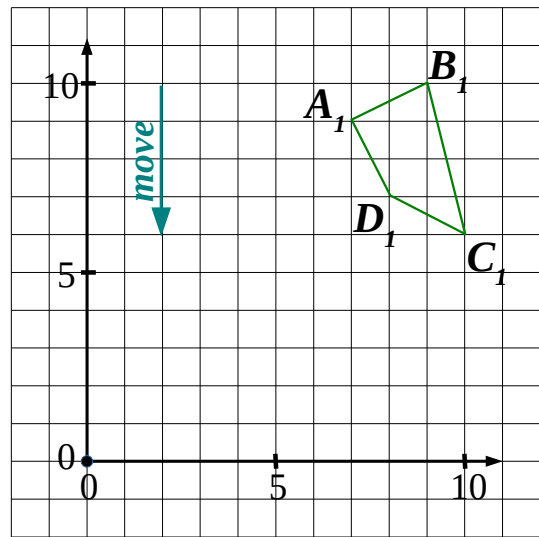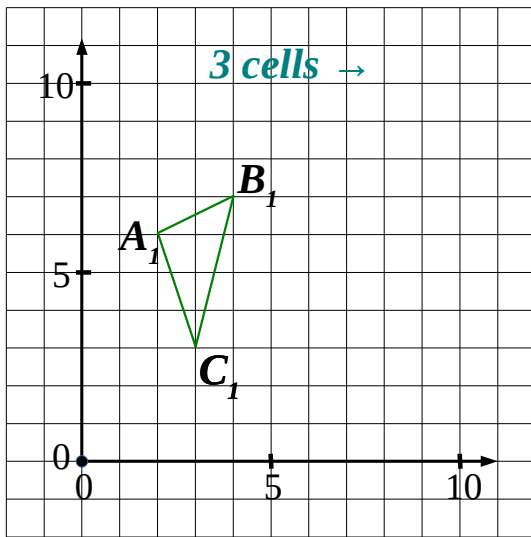
11 Calculate:

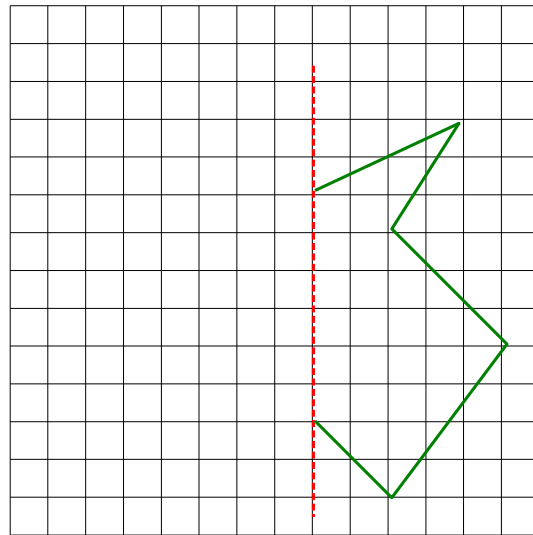$(75 - 43) \div 8 + (25 \times 3) =$ _____

$23 + 45 \div 5 - 14 \times 2 =$ _____

$16 \times 3 \div 6 \times 7 + 37 \times 2 =$ _____
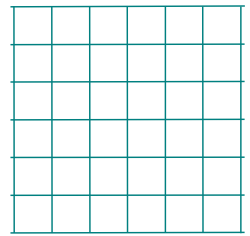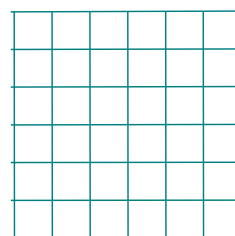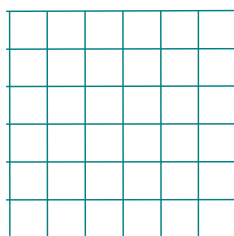
12 Find symmetry line(s) in the shapes that have them, cross out the shapes without symmetry lines.
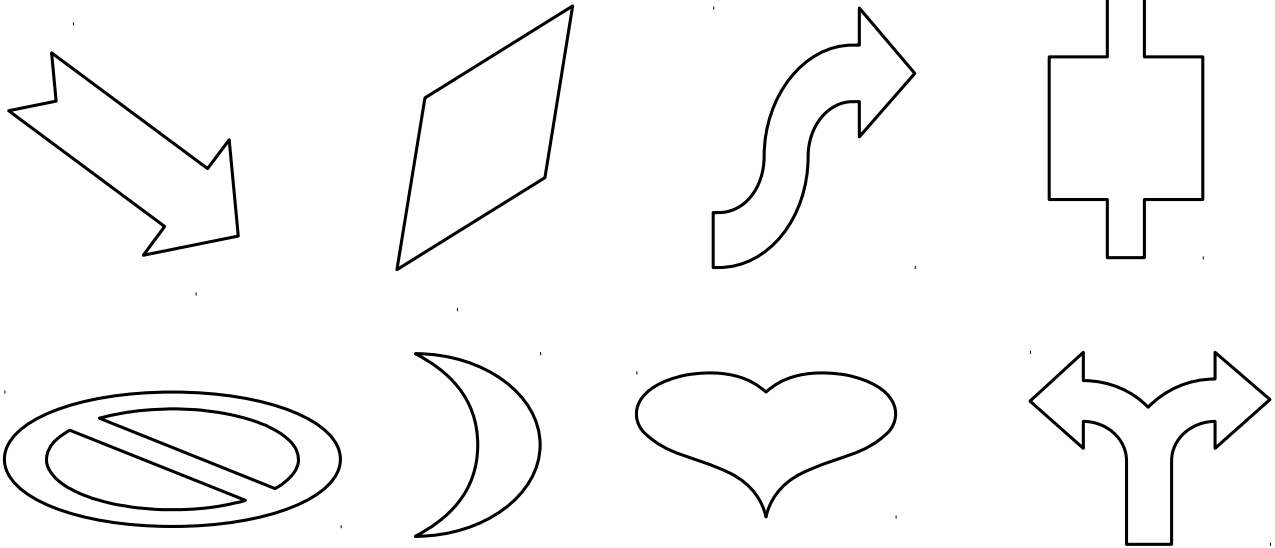
13 Recover symmetric shapes using their symmetry lines.
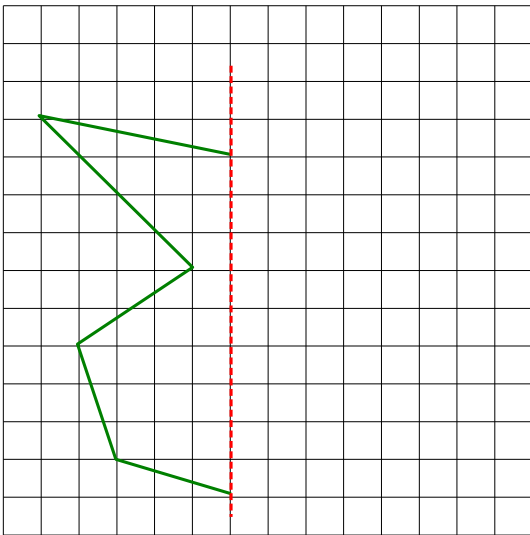
14 Find the answer **without cumbersome calculations**:

9 + 281 − 114 + 582 − 280 + 114 − 581 + 280 = _____

3 + 17 × 8 ÷ 8 × 9 ÷ 9 = _____

822 + 524 × 13 − 524 × 10 − 524 × 3 + 1 − 822 = _____

15 Construct a circle that has only one intersection point with s = Circ(W, 2 cm).

Where is this intersection point?_____ Label it K.

 Write down you algorithm in
symbolic form:

1. _____

2. _____

3. _____

4. _____
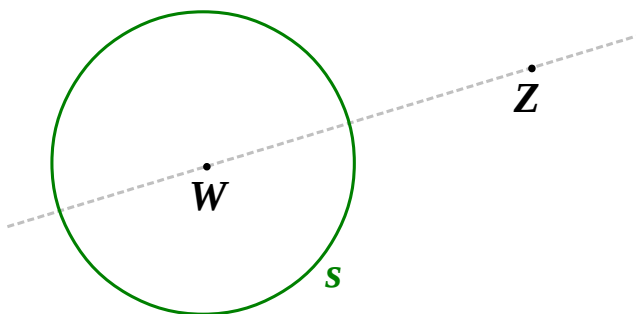
You may not need to use all four line
or may need to use more than four.

* Can you find a second such circle? _____Where does it intersect circle s?____

16 Venn Diagram depicts students liking different creatures.
How many students like …

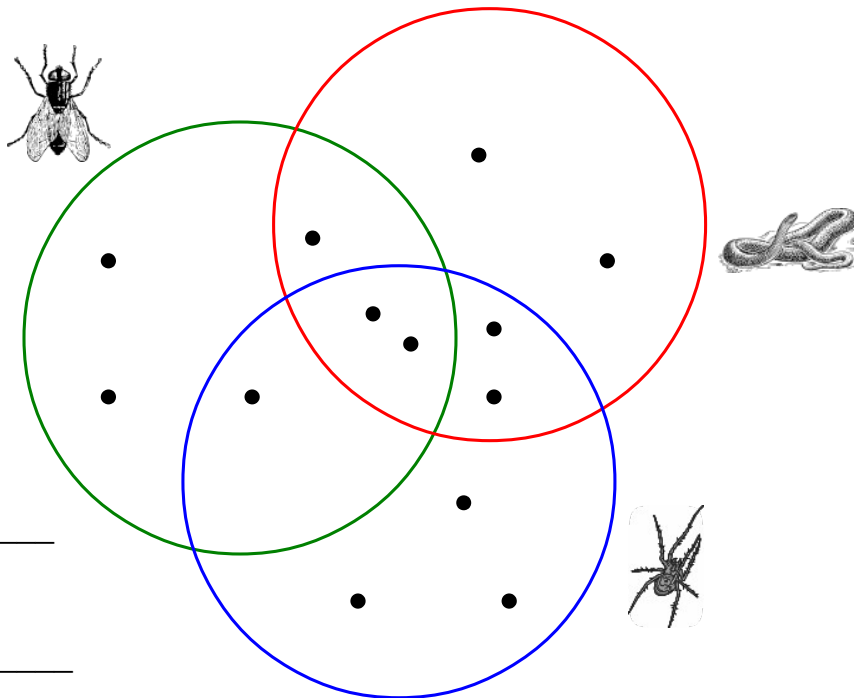… snakes? _____

… flies? _____

… spiders AND flies? _____

… snakes OR spiders? _____

… snakes only? _____

… spiders BUT NOT snakes? _____

… BOTH flies AND spiders? _____

… BOTH flies AND spiders AND snakes? _____

17 Which expression does each program evaluate?

① : $k \times w$

②: $12 + ①$

③: $② - x$

_____

① : $q \div 4$

②: $① \times 5$

③: $② - 3$

_____

To reconstruct an expressions work **backwards** and replace the result of each operation with the operation itself.

①: $m \times 4$

②: $z + p$

③: $① + ②$

_____

① : $5 \times x$

②: $12 \times y$

③: $① + ②$

_____

18 Jake the Mouse was caught by the Cheese Factory Manager. The Factory Manager decided that if Jake the Mouse solves the following riddle, he'll be free to go:

There are 3 boxes with cheeses. The boxes contain: Cheddar, Swiss and Cheddar and Swiss. Neither one of the actual labels is true.

JTM can open only one box, and take only one head of cheese from that box to be ready to identify the kind of cheese is in each box.

Which box should JTM open?

Title:mishi.8.eps
Creator:Adobe Illustrator(R) 14.0
CreationDate:9/14/2015
LanguageLevel:2

19 Mr. Brown the Cat is 9 years old. The brothers are discussing Mr. Red's age.

FT: *Mr. Red is definitely older than Mr. Brown.*

LJ: *Foxy, are you lying again?*

FT: *No, not lying. I simply forgot that he's younger than Mr. Brown.*

How old is Mr. Red?