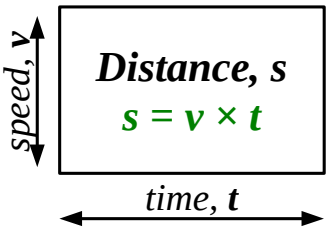
Homework for Lesson № 11

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

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



_____

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

_____

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

_____

A raft drifts evenly 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*** =_____

_____

2 Remove parenthesis 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:

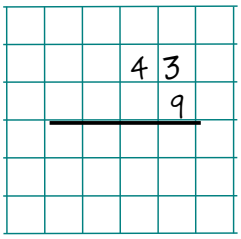
72 : y + 5 = 9 → q = ____

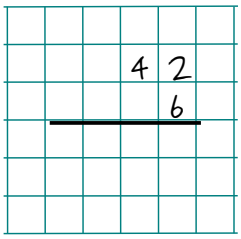
x • 3 + 5 = 17 → f = ____

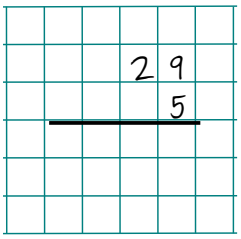
4 A raft flows down the river.

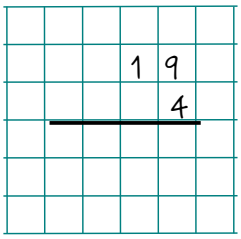
The speed of the river flow is 4 kilometers per hour: ***v = 4 km/h***							
Time: ***t***	1h	3h		6h		8h	
Distance: ***s***			20 km		28 km		40 km

5 Multiply:

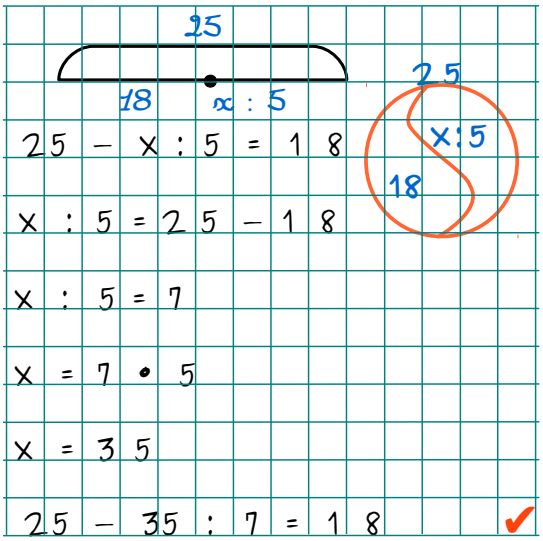


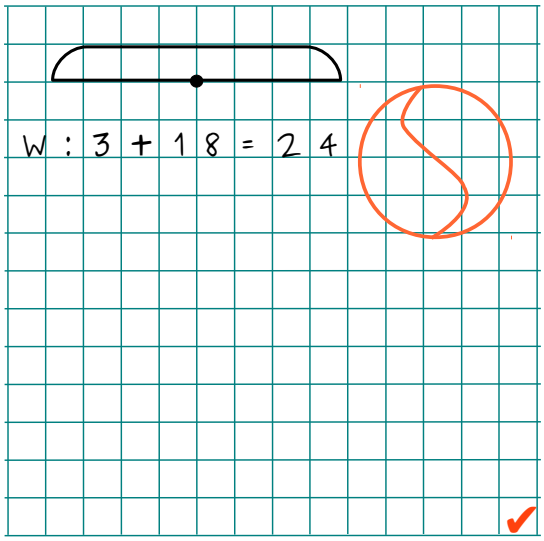






6 Solve an equation using the steps like the ones in the sample





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

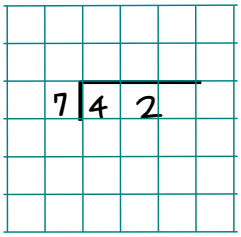
500 cm = ____ dm 300 dm^2 = ____ m^2 20 dm^2 = _____cm^2

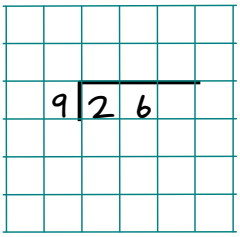
8 Use the sample in assignment **#6** to solve these equations **in you notebook**. Check your answers and once correct copy them below. For each equation make a diagram indicating the whole and its parts:

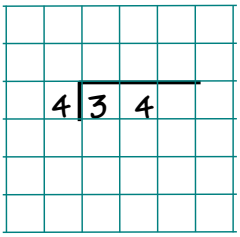
w · 7 – 6 = 22 ***z*** : 4 + 28 = 36 ***x*** : 3 – 17 = 19

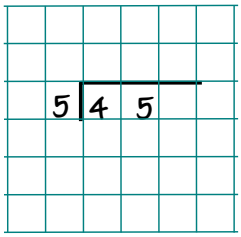
w = _____ ***z*** = _____ ***x*** = _____

9 Divide with or without a remainder:

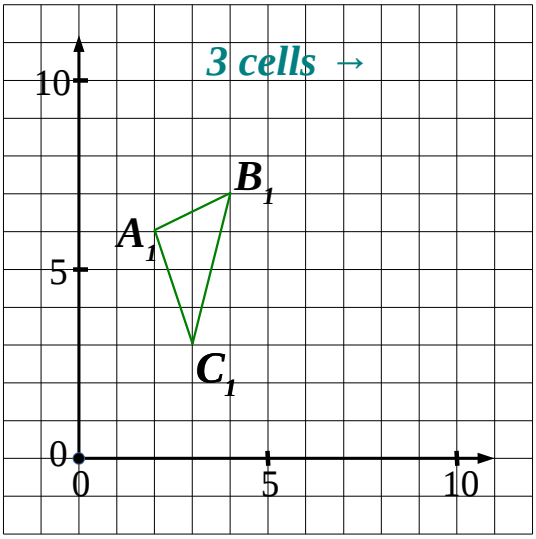


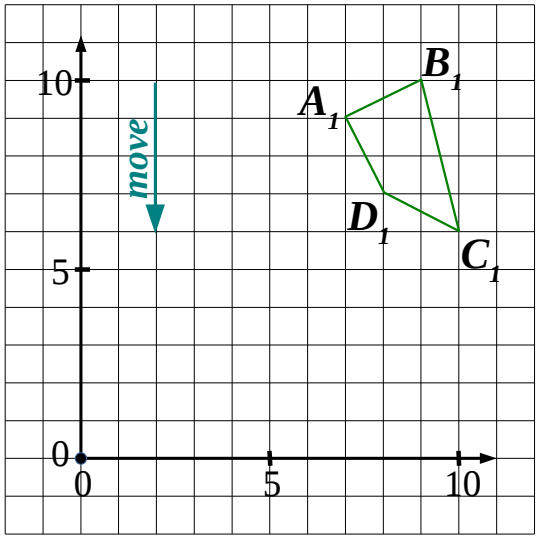






10 Move the shapes according to the instructions; label the moved vertexes as A_2, B_2, *etc*.



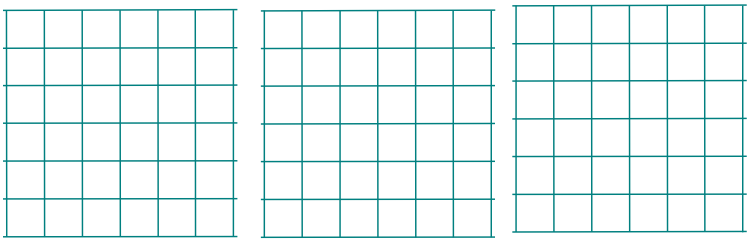


11 Calculate:

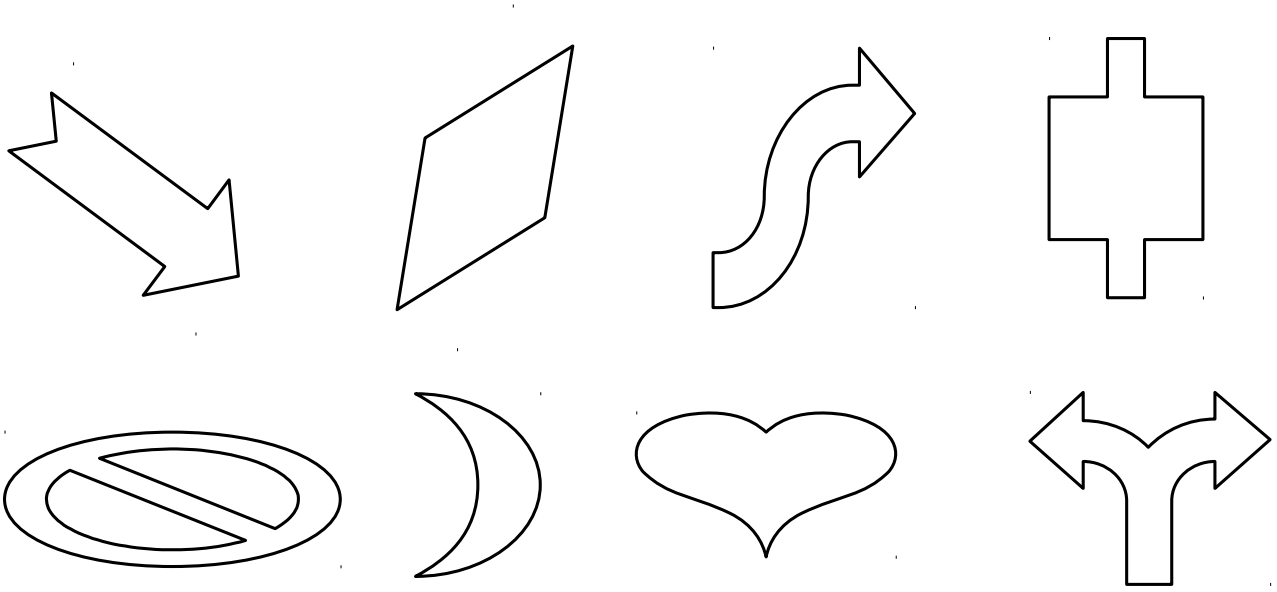
(75 – 43) : 8 + (25 · 3) = _____

23 + 45 : 5 – 14 × 2 = _____

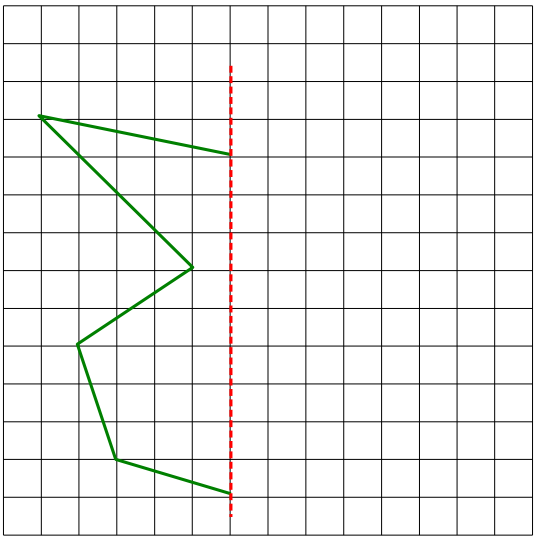
16 × 3 : 6 × 7 + 37 · 2 = _____

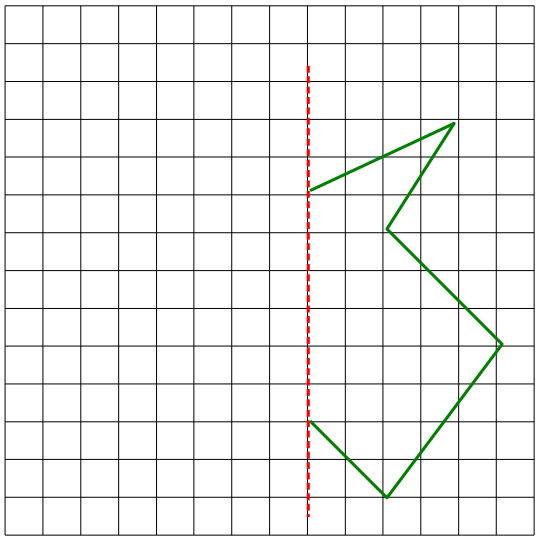


12 Find symmetry line(s) in the shapes that have them, cross out the shapes without symmetry lines.



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 rhombus ***ABCD*** with sides 5 cm. Describe your algorithm.

1. Plot _____
2. _____
3. _____
4. _____

Try to construct rhombus ***KLMT*** with sides 3 cm. Describe your algorithm.

1. Plot _____
2. _____
3. _____
4. _____

Which step of the algorithm failed? _____

Why? _____

16 Which expression does each program evaluate?

① : $k \times w$

②: 12 + ①

③: ② – x

_____

① : q : 4

②: ① × 5

③: ② – 3

_____

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

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

… snakes? _____

… flies? _____

… spiders AND flies? _____

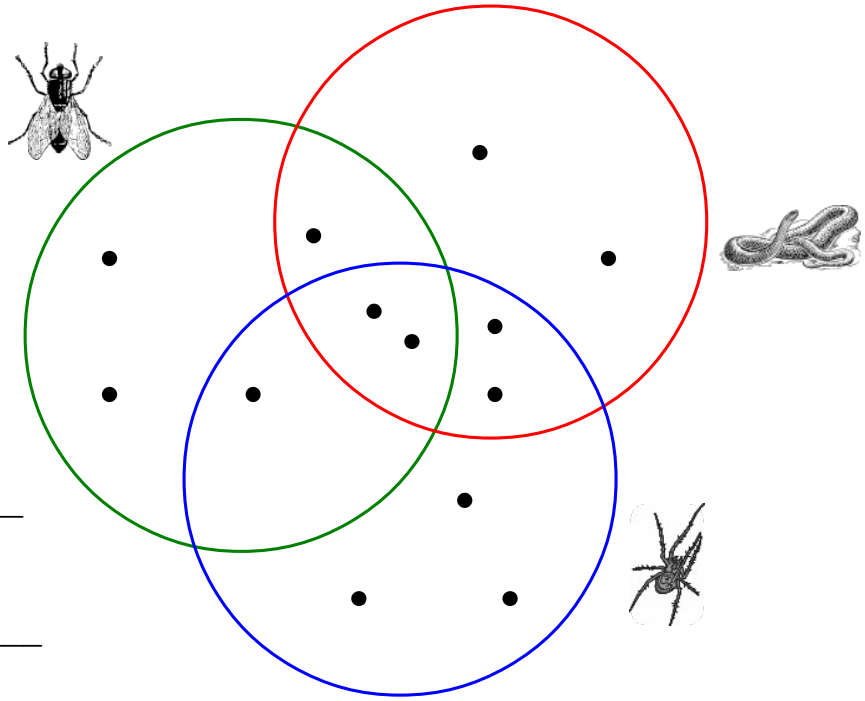
… snakes OR spiders? _____

… snakes only? _____

… spiders BUT NOT snakes? _____

… BOTH flies AND spiders? _____

… BOTH flies AND spiders AND snakes? _____

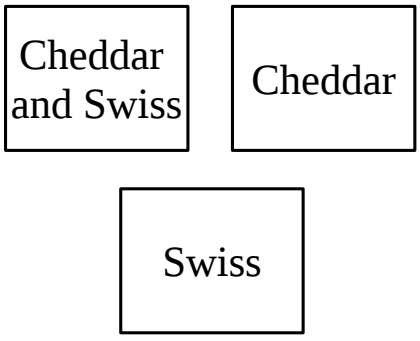


18 Jake the Mouse was caught by the Cheese Factory Manager. The Factory Manager decided that if Jake the Mouse solves the problem he gives, he'll be free to go.

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?



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

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?