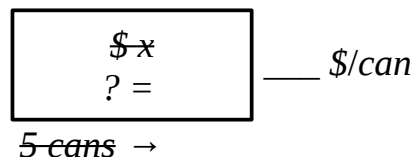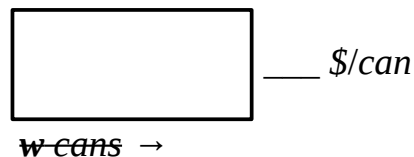## Homework for Lesson № 21

**1** Make appropriate *drawings* AND write *expressions* to solve the word problems.

**A.** 5 cans of juice cost *x* dollars. How much do 7 cans cost?
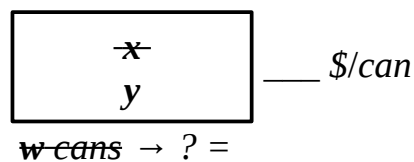
_____

~~$ x~~
? =
~~5 cans~~ →   \_\_\_ $/can

**B.** *w* cans of juice cost *x* dollars. How much do 7 cans cost?

_____

~~w cans~~ →   \_\_\_ $/can

**C.** 5 cans of juice cost *x* dollars. How many cans can FT buy if he has $60?

_____

\_\_\_ $/can

**D.** *w* cans of juice cost *x* dollars. How many cans can FT buy if he has *y* dollars?

_____

~~x~~
y
~~w cans~~ → ? =   \_\_\_ $/can

**2** Do **in your notebook** and copy your answers here:

*a).* Calculate:

$3321 ÷ 9 =$ _____   $15 × 78 =$ _____   $13 × 49 =$ _____

$80 ÷ 2 − 3 + 1 =$ _____   $12 ÷ 3 + 4 − 24 ÷ 3 × 8 =$ _____

*b).* Determine the order of operation in the "left side" expressions **AND** make all necessary **drawings** when solving these equations:

$12 × (x − 32) = 96$   $3x + 40 = 67$   $2500 : (25 − x) = 500$

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

**3** Write each of these numbers in ancient Egyptian symbols:

2,003,251

1, 321, 683

200, 503

8002

| Number | Symbol | Description |
|--------|--------|-------------|
| 1 | \| | Vertical stroke |
| 10 | ∩ | Heel bone |
| 100 | ၆ | Scroll |
| 1000 | � | Lotus flower |
| 10,000 | 𝟨 | Pointing finger |
| 100,000 | 𝛾 | Fish |
| 1,000,000 | ⳤ | Kneeling person |

**4**

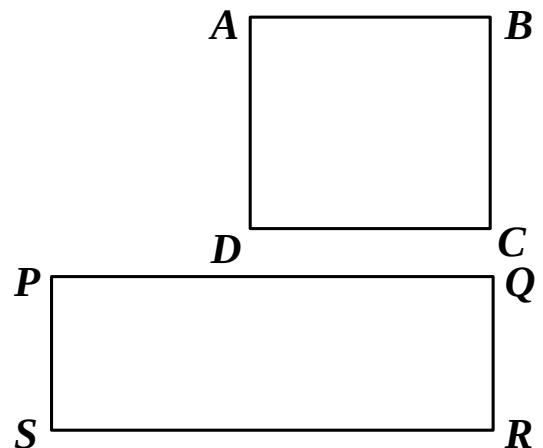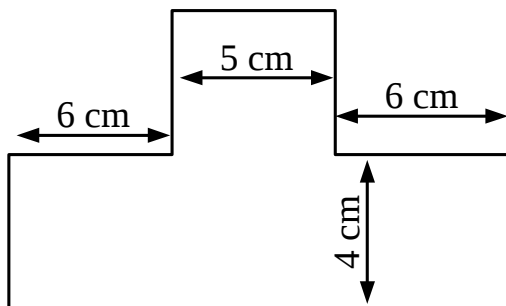**A.** Complete the drawing to find and which rectangle has a larger area and how much larger.

*AB* = 12 cm; *BC* = 9 cm; *SR* = 14 cm; *PS* = 7 cm.

_____

5 cm

6 cm          6 cm

4 cm

S = _____

**C.** The shape on the drawing is made of two rectangles. Find its area.
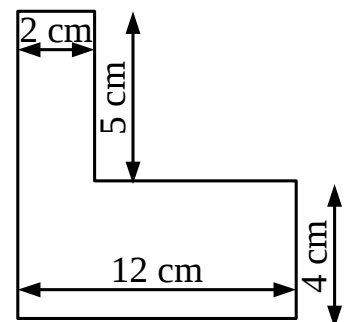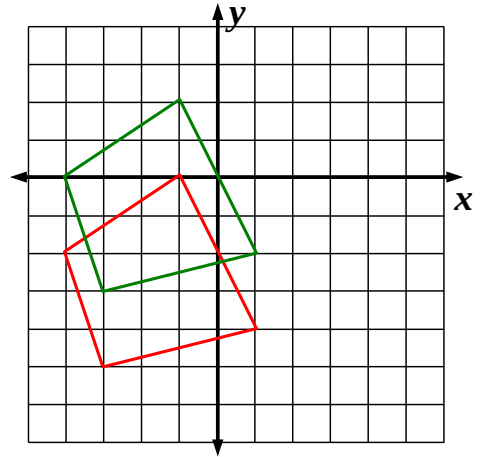
*S* = _____

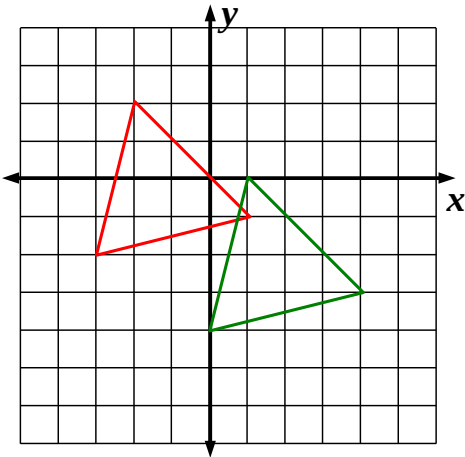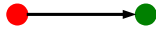**B.** The shape on the drawing is made of a rectangle and a square. Find its area.

2 cm

5 cm

12 cm

4 cm

**5** **A.** Write a rule to describe the motions. Plot appropriate arrow on each drawing.
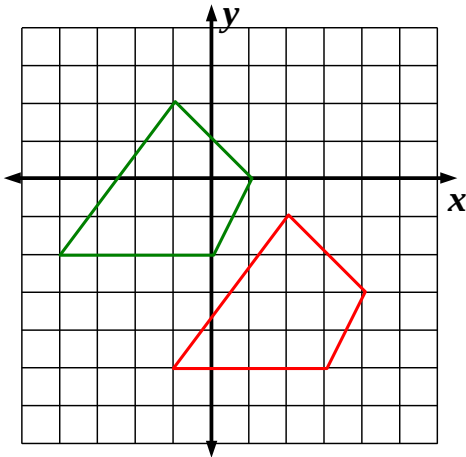
**B.** Plot the shapes in their new positions after moving according to the descriptions:

*A*(-2,3); *B*(-1, -4); *C*(1, -1)

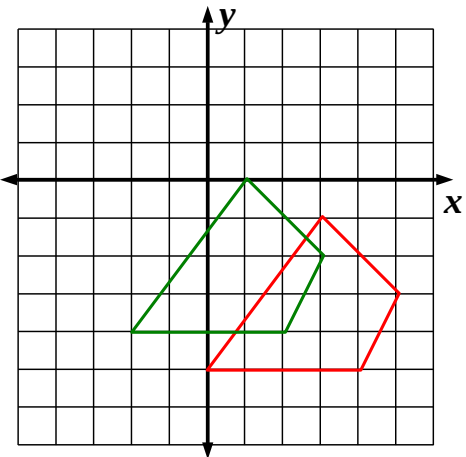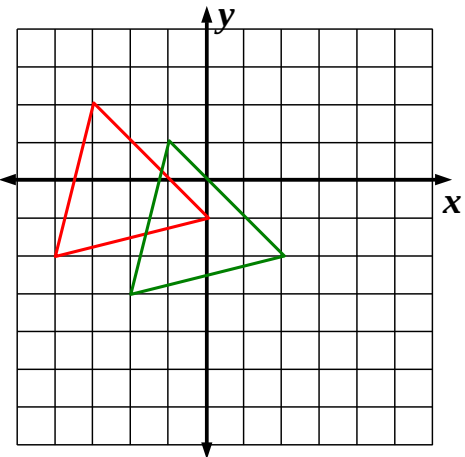Move: 3 units →, 3 units ↓

*A*(0,2); *B*(2, -4); *C*(0, -2); *D*(-1,0)

Move: 2 units ←, 2 unit ↑

*A*(0,1); *B*(3, -3); *C*(-1, -2)

Move: see blue arrow
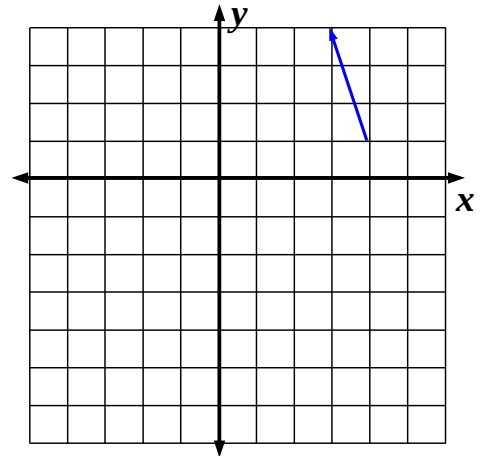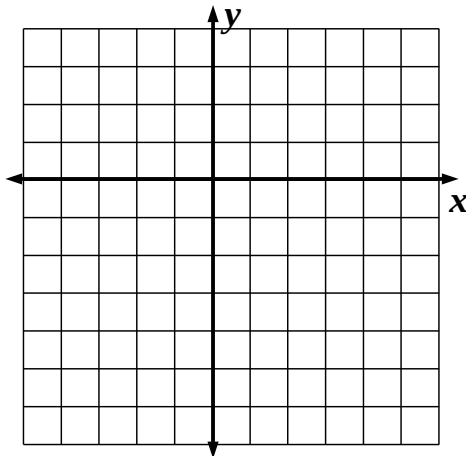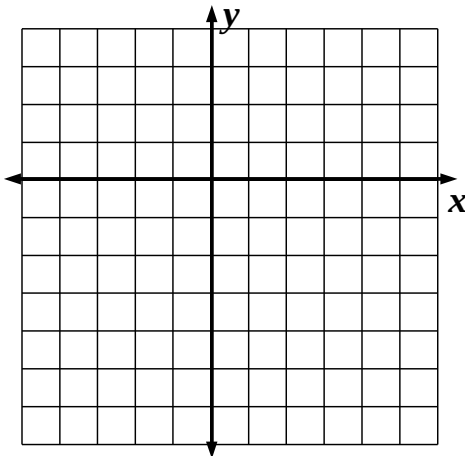
**C.** Analyze the motion of the red shape turning into a green shape. Plot an appropriate arrow. Repeat the same motion to turn the green shape into the third shape (blue).
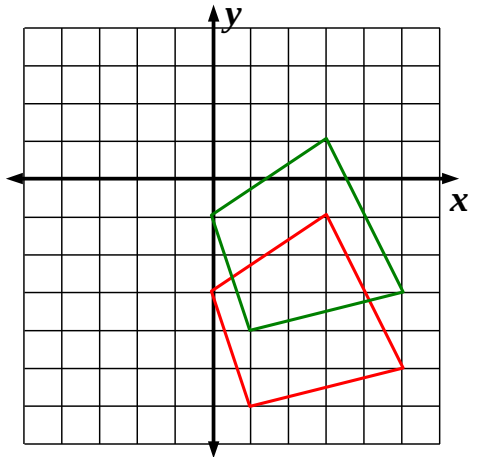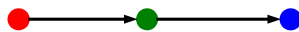
**6**

**A.** Use a green pencil to plot the following points in the provided coordinates:

$A(1, -1)$    $B(3; 4)$    $C(-1,3)$

$D(-6, 1)$    $E(-4, -2)$    $F(-3, 4)$

$G(4, -1)$    $H(-5, 3)$    $I(2, -1)$

**B.** Label on the drawing write down the coordinates beside the labeled points.
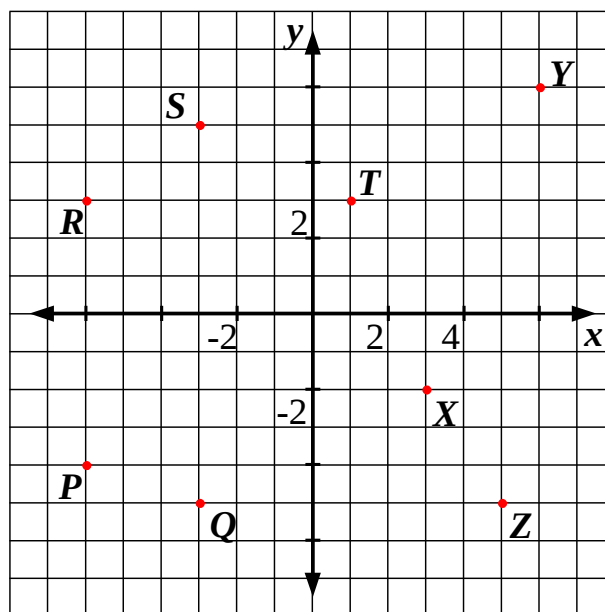
**7**

$Q$ is a set of numbers. Complete the sentences to make correct statements about these numbers.

$$Q = \{1003, 146, 9, 831, 20, 34, 11\}$$

Some of these numbers _____

None of these numbers is _____

At least one of these numbers is _____

More than one of these numbers is _____

At least one of these numbers is not _____

**8**

Do the arithmetics with "magic numbers" that are plotted on the "magic number line"

$$\Delta \quad \Theta \quad \Lambda \quad \Sigma \quad \Omega \quad \prod$$

$\Lambda - (-1) =$          $\Lambda + (-2) =$          $\Sigma + \_\_\_ = \Delta$

$\prod + \quad = \Lambda$          $\Lambda - \quad = \prod$          $\Sigma - \Theta \quad =$

$\Theta - (-3) =$          $\prod + \quad = \Sigma$          $\Delta + 4 =$

**8** Calculate:

(–1) + 7 =          (–1) + (–7) =          (–1) – 7 =          (–1) – (–7) =

1 + 7 =          1 + (–7) =          1 – 7 =          1 – (–7) =

(–5) + 3 =          (–5) + (–3) =          (–5) – 3 =          (–5) – (–3) =

5 + 3 =          5 + (–3) =          5 – 3 =          5 – (–3) =

**9** Solve the puzzles:

| 3 | × | | × | 4 | = | 84 |
|---|---|---|---|---|---|---|
| × | | × | | × | | |
| | × | | × | | = | 45 |
| × | | × | | × | | |
| 6 | × | | × | 2 | = | 96 |
| ‖ | | ‖ | | ‖ | | |
| 90 | | 56 | | 72 | | |

| | × | 1 | × | | = | 56 |
|---|---|---|---|---|---|---|
| × | | × | | × | | |
| 2 | × | | × | 4 | = | 72 |
| × | | × | | × | | |
| 6 | × | 5 | × | 2 | = | 90 |
| ‖ | | ‖ | | ‖ | | |
| 96 | | 45 | | 84 | | |

**10** Solve the equations and check your answers. Use rectangles for help.

$2 : y = \dfrac{1}{8}$

$y =$

$y =$

✔

$x \times \dfrac{1}{7} = 3$

$x =$

$x =$

✔

$w : \dfrac{1}{3} = 30$

$w =$

$w =$

✔

**11** Calculate:

$\frac{1}{3}$ : $\frac{1}{2}$ = $\frac{1}{3}$ × ☐ =          $\frac{1}{4}$ : $\frac{1}{3}$ = $\frac{1}{4}$ × ☐ =          $\frac{1}{8}$ : $\frac{1}{3}$ = $\frac{1}{8}$ × ☐ =

$\frac{1}{2}$ : $\frac{1}{5}$ = $\frac{1}{2}$ × ☐ =          $\frac{1}{6}$ : $\frac{1}{7}$ = $\frac{1}{6}$ × ☐ =          $\frac{1}{7}$ : $\frac{1}{9}$ = $\frac{1}{7}$ × ☐ =

$\frac{1}{11}$ : $\frac{1}{4}$ =          $\frac{1}{4}$ : $\frac{1}{5}$ =          $\frac{1}{6}$ : $\frac{1}{5}$ =          $\frac{1}{8}$ : $\frac{1}{5}$ =

$\frac{1}{3}$ : $\frac{1}{7}$ =          $\frac{1}{12}$ : $\frac{1}{5}$ =          $\frac{1}{11}$ : $\frac{1}{6}$ =          $\frac{1}{2}$ : $\frac{1}{9}$ =

$1 - \frac{1}{2}$ =          $1 - \frac{1}{3}$ =          $1 - \frac{1}{4}$ =          $2 - \frac{1}{2}$ =

**12** Solve the word problems:

**A.** Foxy tail took 2 kg of cheese from the cheese factory. He decided to package this cheese into bags by putting ¼ kg of cheese into each bag. How many bags does he need to package the cheese?

_____

**B.** Greedy Rat found one of the ¼ kg bags of cheese left by foxy tail and ate half of the cheese from this bag. How much cheese did he eat?

_____

**C.** Three quarters of the 2 kg of cheese taken by Foxy tail went bad. How much cheese remained well?

2 kg

B          W

_____