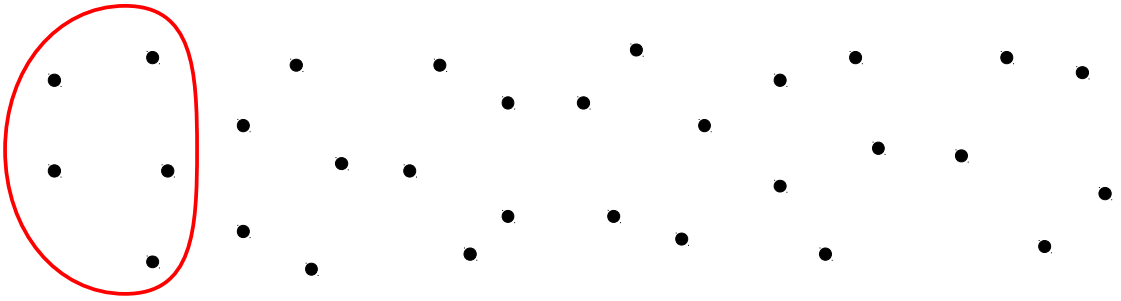
# Lesson № 2

## Multiplication and Division

**1** Divide the points on the plot into groups of five.

Count the points on the drawing.



How many points are totally on the drawing? _____

How many groups of five did you obtain? _____

**30 ÷ 5 = ___**

**Grouping points is division.**

**Counting points divided into groups is multiplication**

**2** Simplify expressions:

$4 + 4 + 4 + 4 + 4 + 4 =$ ____×____

$\underbrace{4 + 4 + \ldots + 4}_{16 \text{ times}} =$ ____×____

$a + a + a + a + a + a =$ ____×____

$\underbrace{a + a + \ldots + a}_{12 \text{ times}} =$ ____×____

$\underbrace{4 + 4 + 4 \ldots + 4 + 4}_{b \text{ times}} =$ ____×____

$\underbrace{a + a + \ldots + a}_{z \text{ times}} =$ ____×____

**3** Solve the word problems:

**a).** A factory produced ***8*** gift boxes on the first day. Next day it produced ***10*** gift boxes. How many gift boxes did it produce in two days?

_____

**b).** A factory packs ***8*** gift boxes each day. How many gift boxes will it pack in ***10*** days?

_____

**c).** A factory packs ***x*** gift baskets each day. How many gift boxes will it pack in ***q*** days?

_____

**Order of operations with multiplication and division.**

**1.** Operations of multiplication and division precede the operations of addition and subtraction.

**2.** Operations of multiplication and division are performed in the order they are written.

**3.** To change this order of operations parenthesis are used

**4**

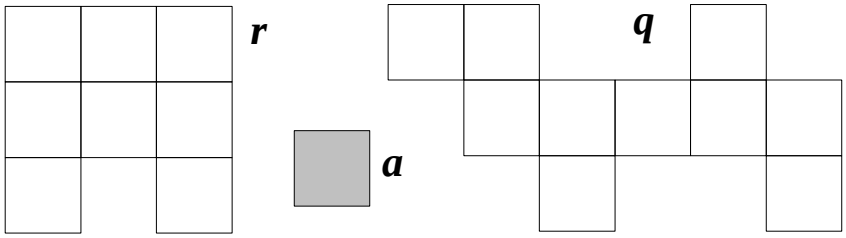
Indicate the order of operations in the following expressions. Evaluate when possible.

| | | |
|---|---|---|
| $a + x \cdot 12 + q$ | $m \times n - p : z$ | $12 + 8 : 4 - 2 =$ |
| $(a + x) \cdot 12 + q$ | $m \times (n - p) : z$ | $(12 + 8) : 4 - 2 =$ |
| $a + x \cdot (12 + q)$ | $(m \times n - p) : z$ | $12 + 8 : (4 - 2) =$ |

## Areas of Random Shapes and Rectangles.

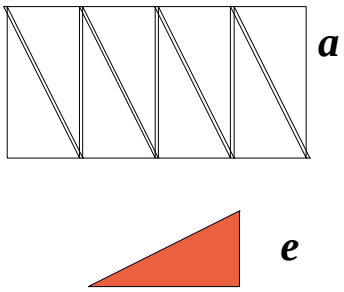
**5**

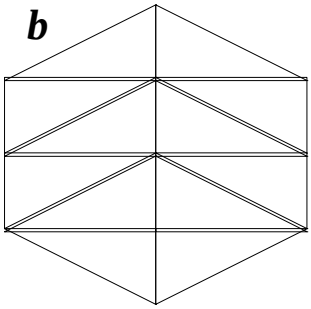
Measure the areas of the following shapes using the provided measures.




***r*** = ☐ ***a***

***q*** = ☐ ***a***



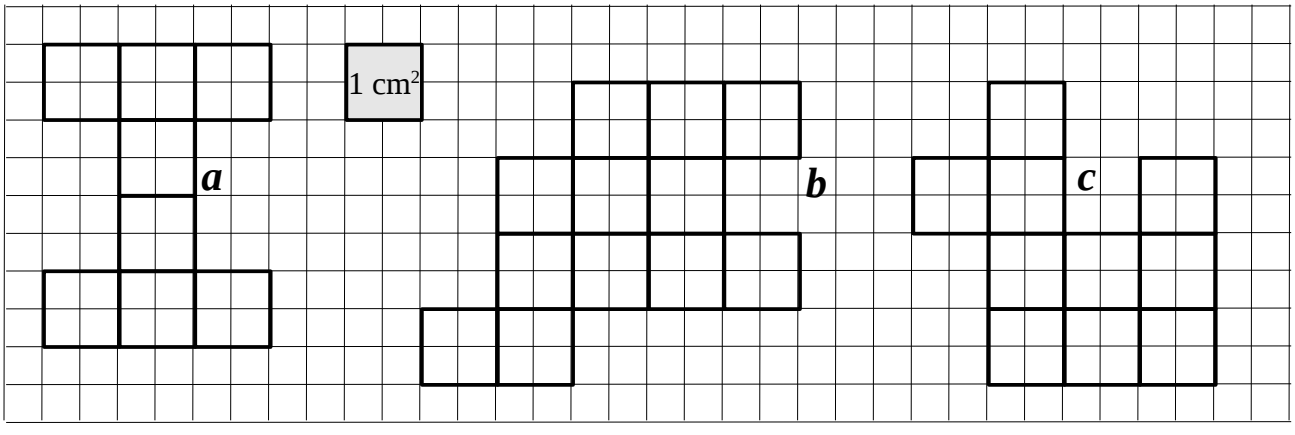

***a*** = ☐ ***e***

***b*** = ☐ ***e***

**Square centimeter.**

A square centimeter is the area of a square 1cm × 1 cm

**6** Measure the areas of the following shapes in square centimeters and in cells.



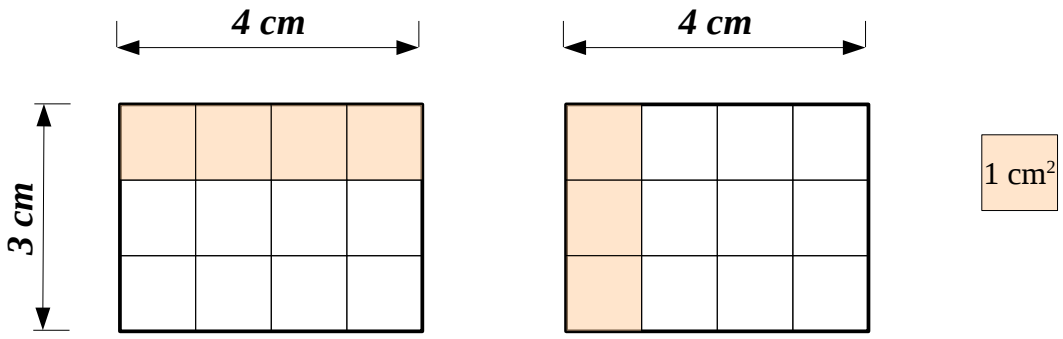

***a*** = _____ $cm^2$ ***b*** = _____ $cm^2$ ***c*** = _____ $cm^2$

***a*** = _____ cells ***b*** = _____ cells ***c*** = _____ cells

**Finding areas of Rectangles and Commutative property of multiplication:**

**7** A rectangle is 4 cm long and 3 cm wide. Find the area of the rectangle in square centimeters.

Look at the two ways to solve the problem



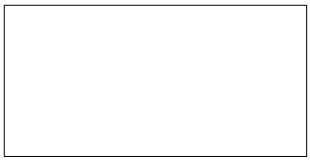

**Method I**: S = 4 cm² × 3 = ____ cm²

**Method II**: S = 3 cm² × 4 = ____ cm²

**The area of a rectangle equals the product of its sides:**

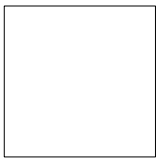
$$S = a \times b = b \times a$$

**8** Measure the sides of the rectangles in centimeters and calculate their areas:



***a*** = cm ***b*** = cm

***S*** = cm²

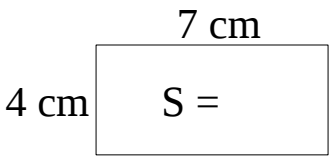


***a*** = cm ***b*** = cm

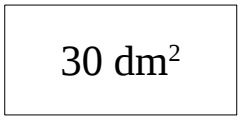
***S*** = cm²

**9** Complete the drawing to solve the following word problems:

**a).** One side of a rectangle is 7 cm. Another side is 4 cm. What is the area of the rectangle?

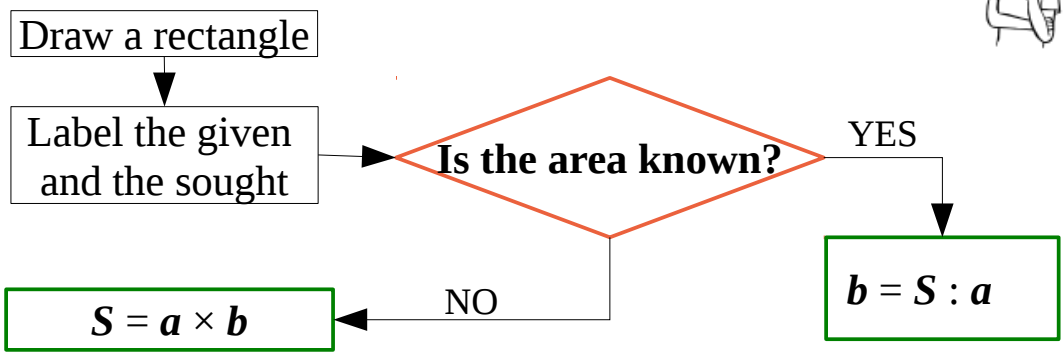



**b).** A side of a rectangle is 5 dm. What is the other side of the rectangle if its area is 30 $dm^2$?




**c).** The area of a rectangle is 24 $m^2$. What is the width of the rectangle if its length is 8 m?

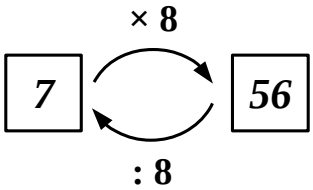
**10** Solving word problems about rectangles.



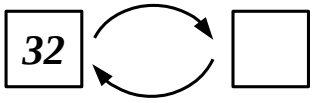

**11** **Multiplication and Division Operations:**

7 × 8 =

7 × 8 : 8 =

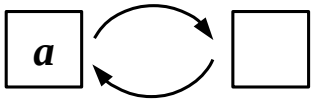



32 : 4 =

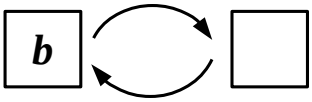



32 : 4 × 4 =

***a*** × 5 : 5 =

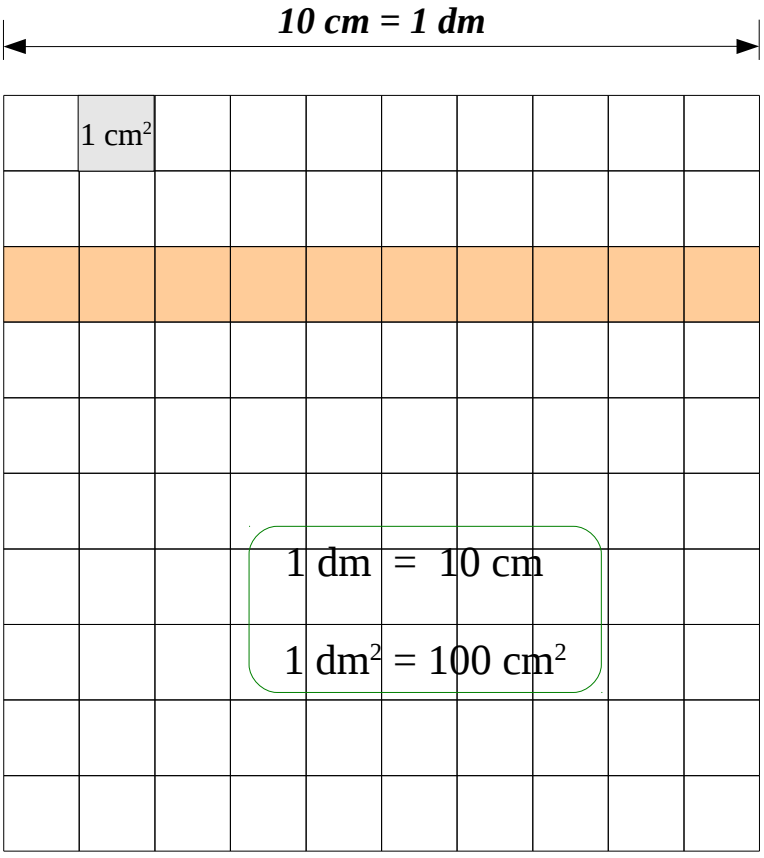



***b*** : 8 × 8 =



## Square Centimeter and Square Decimeter

**12** Convert:




5 $dm^2$ = _____ $cm^2$

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

300 $cm^2$ = _____ $dm^2$

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

**13** Calculate:

2 $cm^2$ + 5 $cm^2$ = ____ $cm^2$

3 $dm^2$ – 2 $dm^2$ = ____ $dm^2$

15 $cm^2$ – 7 $cm^2$ = ____ $cm^2$

11 $dm^2$ + 7 $dm^2$ = ____ $dm^2$

500 $cm^2$ + 1 $dm^2$ = ____ $cm^2$

500 $cm^2$ + 1 $dm^2$ = ____ $dm^2$

## Additional Problems:

**14** Use replacement to simplify the following equations.

| | | |
|---|---|---|
| X:5 − 2 = 3 | y = x:5 | y − 2 = |
| 27 − X•3 = 9 | z = x•3 | |
| X:2 + 4 = 9 | q = | |
| 12:w + 5 = 9 | f = | |