

Homework for Lesson № 26

1

Convert the units (1 m = 100 cm = 10 dm = 1000 mm; 1 kg = 1000 g):

31 cm =	m	29 g =	kg	7 dm =	m	11 min =	h
1 mm =	cm	3 mm =	cm	13 min =	h	7 cm =	dm
1 mm =	m	9 cm =	m	17 g =	kg	3 cm =	m

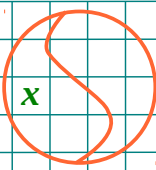

2

Solve the equations:

$$x + \frac{1}{6} = \frac{1}{3}$$

$x =$

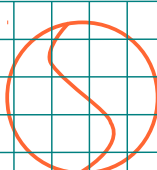

$x =$

$$\frac{2}{3} - x = \frac{1}{6}$$

$x =$

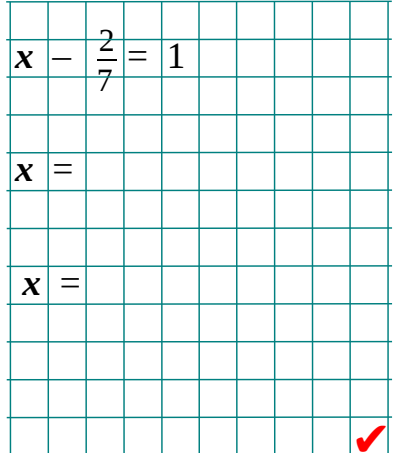
$x =$

$$x - \frac{2}{7} = 1$$

$x =$

$x =$



3

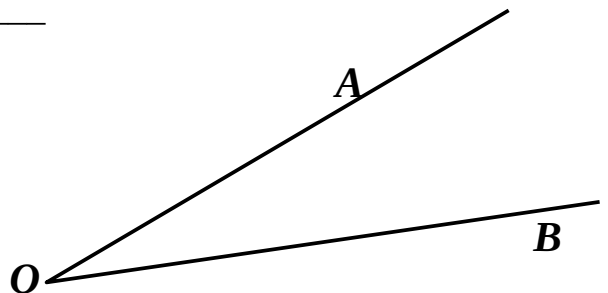
Use a compass and a straight edge to plot $\angle AOX = \angle AOB$ and record your algorithm.

1. Plot $w = \text{Circ}(\quad , \quad)$ _____

2. Find _____ _____

3. Find _____

4. Plot $q = \text{Circ}(\quad , \quad)$



- 4** Write the programs to calculate the following expressions, for each one write a corresponding transformed expression resulting from each step.

$$6w - 4x$$

1. $6 \times w$ ① $- 4x$

2. _____

3. _____

$$p + (2x - 3) : 4$$

1. _____

2. _____

3. _____

4. _____

- 5** Fill in the blanks and calculate:

$$16 \times \frac{3}{4} = 16 : \square \times \square = \quad 18 \times \frac{1}{3} = 18 : \square \times \square =$$

$$15 \times \frac{2}{5} = 15 \times \square : \square = \quad 24 \times \frac{2}{3} = 24 \times \square : \square =$$

- 6** Calculate:

$$2 : \frac{2}{7} = 2 \times \frac{\square}{\square} =$$

$$1 : \frac{3}{5} = 1 \times \frac{\square}{\square} =$$

$$6 : \frac{5}{4} = 5 \times \frac{\square}{\square} =$$

$$4 : \frac{1}{3} = 4 \times \frac{\square}{\square} =$$

$$5 : \frac{3}{5} = 5 \times \frac{\square}{\square} =$$

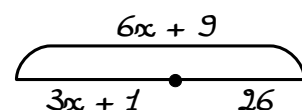
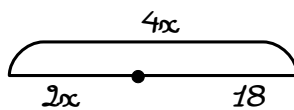
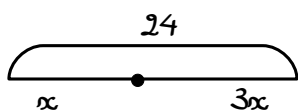
$$2 : \frac{3}{4} = 2 \times \frac{\square}{\square} =$$

$$6 : \frac{2}{7} = 6 \times \frac{\square}{\square} =$$

$$4 : \frac{1}{9} = 4 \times \frac{\square}{\square} =$$

$$1 : \frac{2}{7} = 1 \times \frac{\square}{\square} =$$

- 7** In your notebook write and solve equations based on the drawings:



8 Calculate:

$$6 : \frac{2}{3} = 6 \times \frac{\square}{\square} =$$

$$8 : \frac{2}{5} = 8 \times \frac{\square}{\square} =$$

$$5 : \frac{3}{4} = 5 \times \frac{\square}{\square} =$$

$$7 : \frac{1}{3} = 7 \times \frac{\square}{\square} =$$

$$4 : \frac{3}{5} = 4 \times \frac{\square}{\square} =$$

$$6 : \frac{3}{4} = 6 \times \frac{\square}{\square} =$$

9 Solve the equations:

Way one (old)

$\frac{3}{7}x = 12$							
$\frac{1}{7}x =$							
$x =$							
$x =$							

Way two (new)

$\frac{2}{3}x = 8$							
$x = 8 : \frac{2}{3}$							
$x = 8 : \times$							
$x =$							

Choose your way

$\frac{6}{11}x = 12$							
$x =$							
$x =$							
$x =$							

10 Transform the fractions into equivalent ones by changing their denominators and factors appropriately. Some examples are impossible to do. Cross them out.

$$\frac{2}{4} = \frac{\square}{12}$$

$$\frac{5}{7} = \frac{\square}{21}$$

$$\frac{6}{9} = \frac{\square}{3}$$

$$\frac{4}{13} = \frac{\square}{7}$$

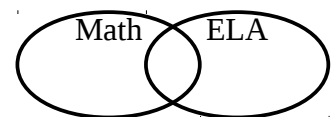
$$\frac{\square}{6} = \frac{2}{12}$$

$$\frac{\square}{9} = \frac{3}{26}$$

$$\frac{15}{10} = \frac{3}{\square}$$

$$\frac{\square}{7} = \frac{12}{21}$$

11 There are 240 students in the third grade and each of them either like math, language arts, or both. $\frac{4}{5}$ of them like math, $\frac{5}{8}$ of them like language arts. How many students like both math and language arts?



12 Simplify:

$$\frac{6}{8} = \frac{\square}{\square}$$

$$\frac{24}{32} = \frac{\square}{\square}$$

$$\frac{27}{9} = \frac{\square}{\square}$$

$$\frac{4}{8} = \frac{\square}{\square}$$

$$\frac{5}{15} = \frac{\square}{\square}$$

$$\frac{14}{21} = \frac{\square}{\square}$$

$$\frac{8}{32} = \frac{\square}{\square}$$

$$\frac{60}{90} = \frac{\square}{\square}$$

$$\frac{8}{16} = \frac{\square}{\square}$$

$$\frac{30}{50} = \frac{\square}{\square}$$

$$\frac{7}{28} = \frac{\square}{\square}$$

$$\frac{3}{9} = \frac{\square}{\square}$$

13 Compare the fractions (<, >, =) by expanding them to a reasonable common denominator:

$$\frac{\square}{20} = \frac{3}{4} \quad \square \quad \frac{2}{5} = \frac{\square}{20}$$

$$\frac{\square}{\square} = \frac{2}{5} \quad \square \quad \frac{3}{7} = \frac{\square}{\square}$$

$$\frac{\square}{\square} = \frac{3}{4} \quad \square \quad \frac{5}{8} = \frac{\square}{\square}$$

$$\frac{\square}{\square} = \frac{3}{5} \quad \square \quad \frac{7}{10} = \frac{\square}{\square}$$

14 Present the following fractions as sequences of multiplications and divisions. Check your sequences by calculating.

$$\frac{\square}{\square} = \frac{2 \times 6}{4} = \square : \square \times \square =$$

$$\frac{\square}{\square} = \frac{10 \times 30}{6 \times 5} = \square \times \square : \square : \square =$$

15 Simplify these fractions without calculations:

$$\frac{4 \times 7}{9 \times 4} = \frac{\square}{\square}$$

$$\frac{3 \times 27 \times 2}{2 \times 8 \times 27} = \frac{\square}{\square}$$

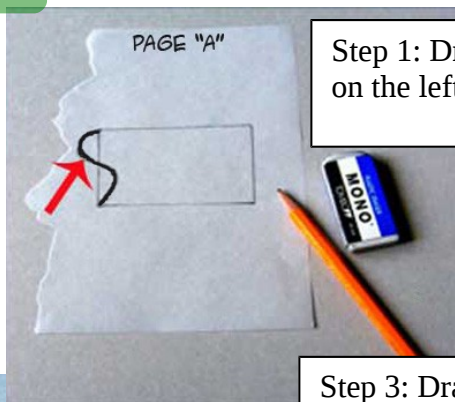
$$\frac{12 \times k \times 3}{3 \times 19 \times 12} = \frac{\square}{\square}$$

$$\frac{5 \times 9}{5 \times 7} = \frac{\square}{\square}$$

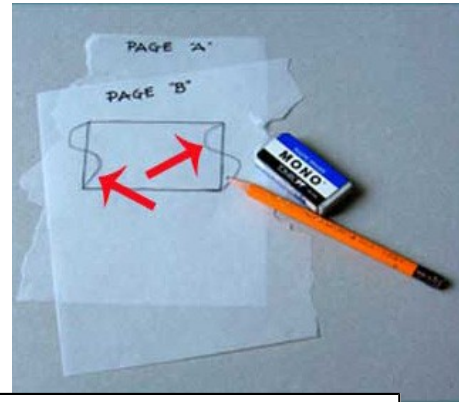
$$\frac{7 \times 11 \times 4}{7 \times 5 \times 11} = \frac{\square}{\square}$$

$$\frac{13 \times p \times 19}{19 \times m \times 13} = \frac{\square}{\square}$$

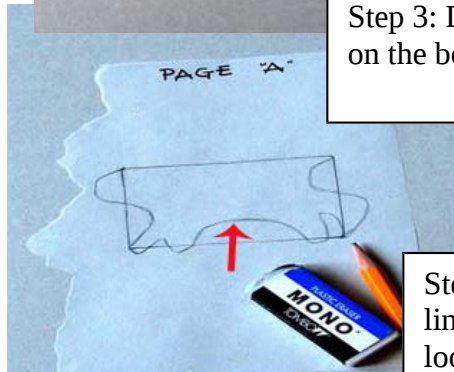
17 Creating your own tessellation (<http://www.tesselations.org/diy-paper-a.html>)



Step 1: Draw a squiggly line on the left of the rectangle

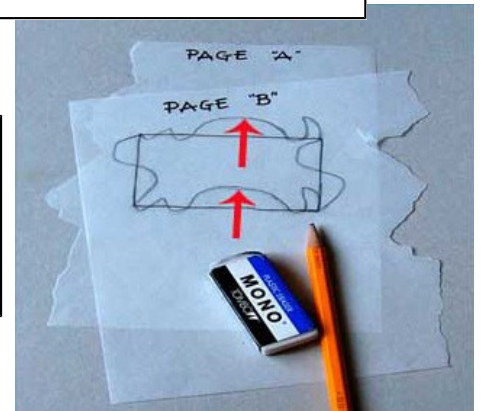


Step 2: Copy the exact squiggly line on the right of the rectangle

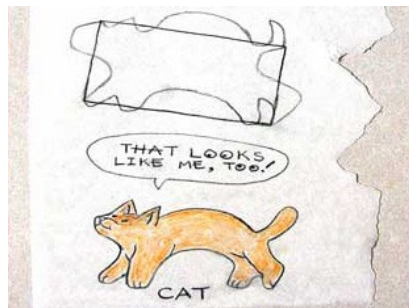
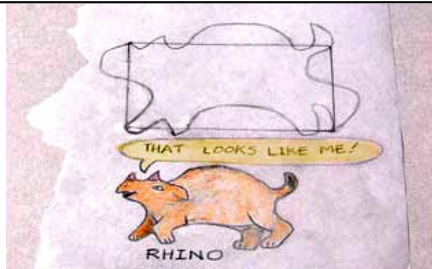


Step 3: Draw squiggly lines on the bottom of the shape

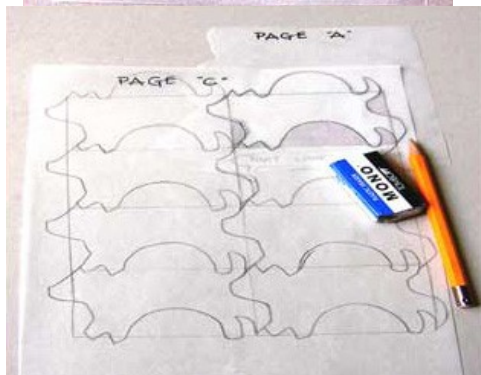
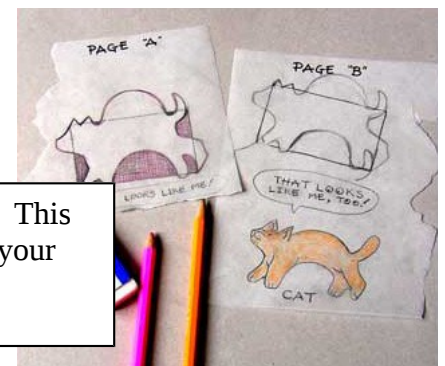
Step 4: Copy the exact squiggly lines on the top of the shape. Start looking what it may look like...



It may look like an animal e.g. a rhino or a cat! It may look like a fish or a shoe, etc.



Step 5: Cut out your final shape. This will be the template you use for your tessellation.



Step 6: Copy the template in pencil on a piece of paper, several times, so you can see the pattern forming.

Step 7: Outline in ink, rub out the pencil lines, put in some detail, color in, decorate and bring to the next lesson!

