Math 3 Homework 9

1 Compare the expressions without calculating its values. Use <, >, =

5 × 6 – 5 ____ 5 × 5 + 5

7 × 6 + 7 ____ 6 × 7 + 6

48 + 20 ____ 4 × 5 + 50

24 + 32 ____ (32 – 24) × 7

2 Calculate:

20 x 30 =	15 x 100 =	200 x 2 =
50 x 100 =	25 x 10 =	40 x 10 =

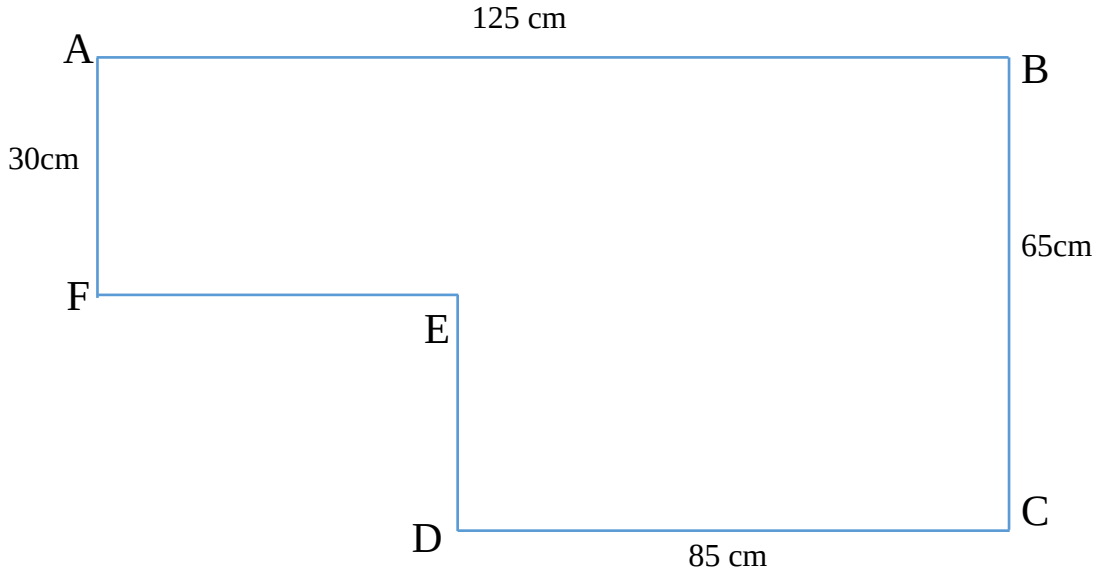
3 At the school's art exhibition 40 drawings were presented. Out of them 8 drawings were made in pencil, and the rest were made with paints. How many times more drawings are done with paints than with a pencil?

_____

_____

_____

4 Find the perimeter of the following figure, if you know some of the sides:



_____

_____

_____

5 Calculate:

a) 9dm 1cm – 3dm 9cm – 2dm 7cm = _____

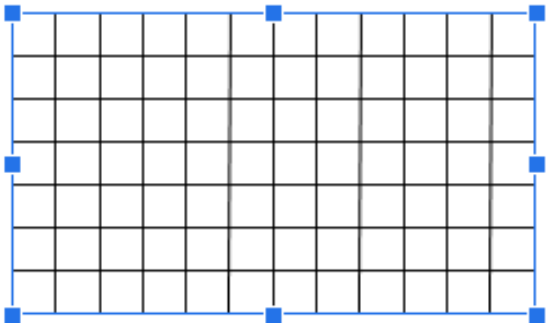
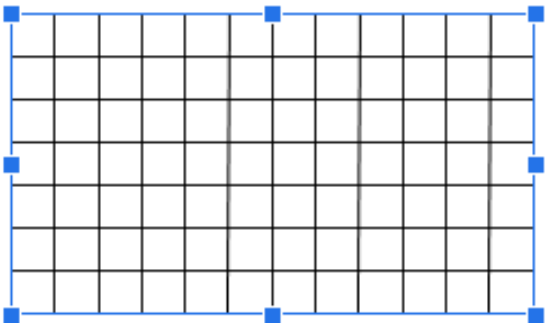
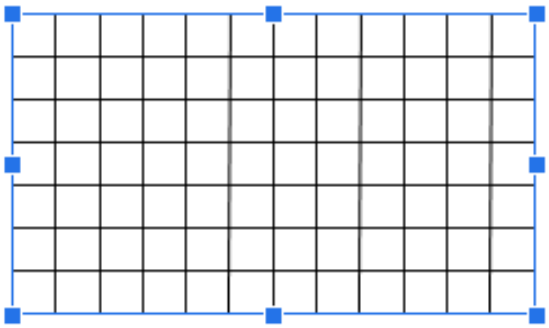
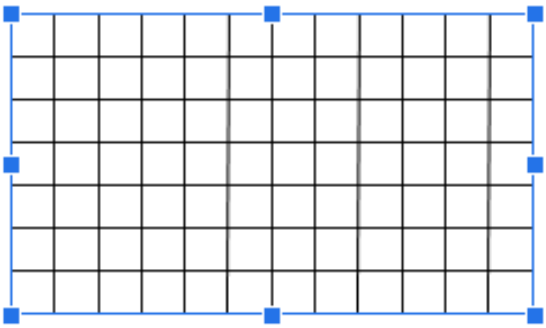
b) 4dm 2cm + 5m 8dm – 7m 6dm = _____

6 Draw a four-sided polygon that has right angles at the 2 bottom corners, an angle less than 90^0 at the upper left corner, and an angle greater than 90^0 in the upper right corner.

7 Calculate:

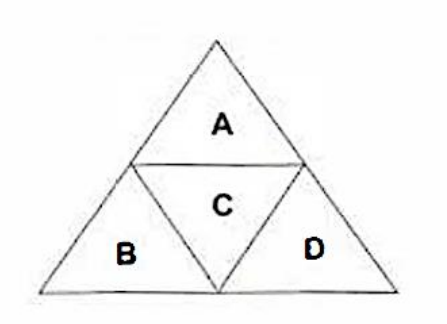
548 + 0 =	0 + 491 =	864 – 0 =
346 – 346 =	0 + 0 =	0 – 0 =
111 × 0 =	2 × 0 =	0 × 39 =
20 x 30 =	15 x 100 =	200 x 2 =
50 x 100 =	25 x 10 =	40 x 10 =

8 Perimeter of quadrilateral is 16 cm (assume that each cell is 1cm). Draw several different quadrilaterals with the same perimeter – 16 cm.

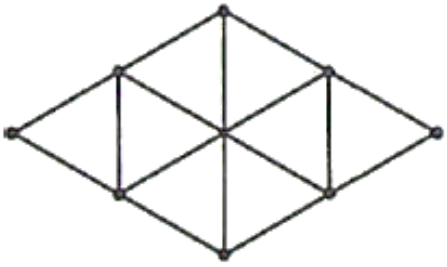
Method: Systematic counting

Example: How many triangles are there in the figure below?



Step 1. Count only triangles, which are formed by 1-unit triangle: A, B, C and D (total: 4)
Step 2. Count only triangles, which are formed by 2-unit triangles: NONE
Step 3. Count only triangles, which are formed by 3-units triangles: NONE
Step 4. Count only triangles, which are formed by 4-units triangles: A+B+C+D (total: 1)
Total: 4 + 0 + 0 + 1 = 5

9 How many triangles are there in the figure below (use a systematic counting method)?



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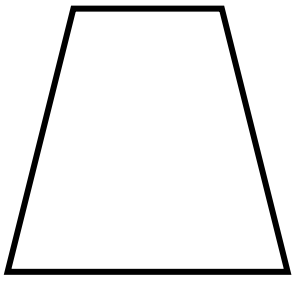
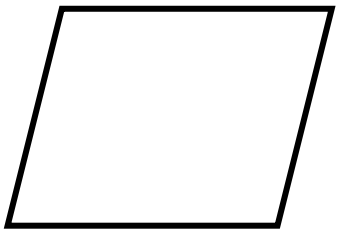
10 Use a protractor to measure in degrees each of the angles in the shapes below:





_____ _____

11 Cora and Cecilia each use chalk to make their own number patterns on the sidewalk. Cora puts 0 in her first box and decides that she will add 3 every time to get the next number. Cecilia puts 0 in her first box and decides that she will add 9 every time to get the next number.

Cora:

0	3								

Cecilia:

0	9								

a) Complete each girl's sidewalk pattern.

b) How many times greater is Cecilia's number in the 5th box be than Cora's number in the 5th box? _____

c) What about the numbers in the 8th box? _____

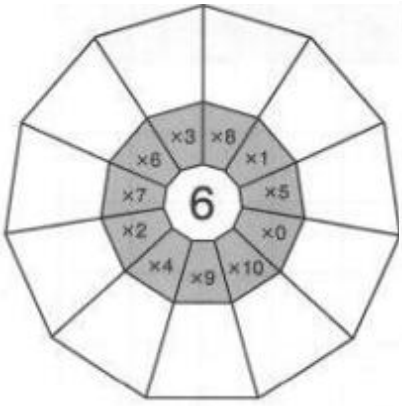
d) The 10th box? _____

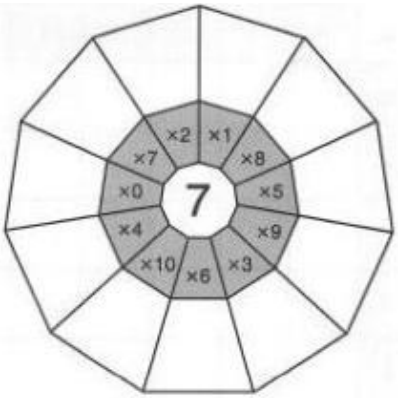
e) What pattern do you notice in your answers for part b? Why do you think that pattern exists?

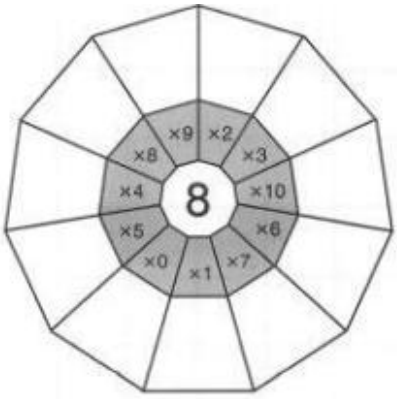
_____

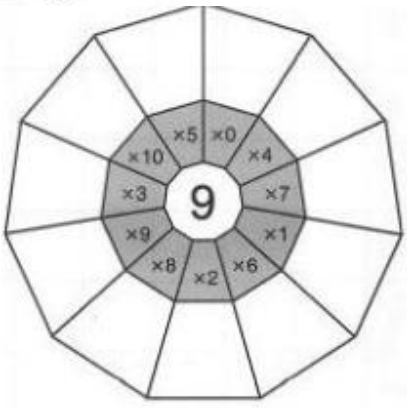
f) If Cora and Cecilia kept their sidewalk patterns going, what number will be in Cora's box when Cecilia's corresponding box shows 108? _____

12 Complete the multiplication facts in the wheels below. Some answers have already been filled in.









13 The numbers 0 through 10 each appears only once in the shaded row and once in the shaded column. Fill in all missed numbers in the table.

×											
			9				0				
								16			
		25								30	
				4							16
									100		
	49										
			0								
					1						
				16							64
						81					

14 We know, that

$9 + 9 + 9 + 9 = 4 \times 9$ and

$4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 8 \times 4$ and

$3 + 3 + 3 + 5 + 5 = 3 \times 3 + 5 \times 2$

Simplify:

a) $n + n + n + n + n =$

b) $a + a + a + a + b + b + b =$

c) $c + c + d + c + d + d =$

15 We know, that $7 - 7 = 0$, $11 - 11 = 0$.

Simplify:

$n - n =$

$a - a =$

$c - d - c + d =$

16 We know, that

$6 + 5 - 5 = 6$ and

$9 + 3 - 3 = 9$

Simplify:

$n + 5 - 5 =$

$16 + n - n =$

$a + 10 + a =$