

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

$5 \times 6 - 5 \quad \underline{\hspace{1cm}} \quad 5 \times 5 + 5$

$7 \times 6 + 7 \quad \underline{\hspace{1cm}} \quad 6 \times 7 + 6$

$48 + 20 \quad \underline{\hspace{1cm}} \quad 4 \times 5 + 50$

$24 + 32 \quad \underline{\hspace{1cm}} \quad (32 - 24) \times 7$

**2** Calculate:

$20 \times 30 =$

$15 \times 100 =$

$200 \times 2 =$

$50 \times 100 =$

$25 \times 10 =$

$40 \times 10 =$

**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?

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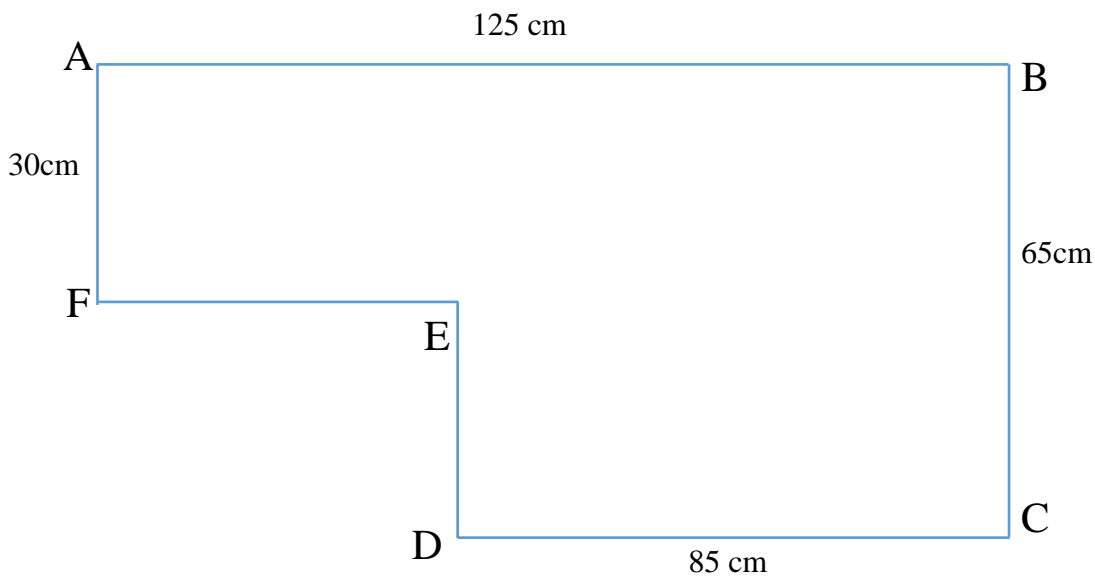


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**4** Find the perimeter of the following figure, if you know some of the sides:




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## HW 9

## Multiplication. Angles. Perimeter.

5

Calculate:

a)  $9\text{dm } 1\text{cm} - 3\text{dm } 9\text{cm} - 2\text{dm } 7\text{cm} =$  \_\_\_\_\_

b)  $4\text{dm } 2\text{cm} + 5\text{m } 8\text{dm} - 7\text{m } 6\text{dm} =$  \_\_\_\_\_

6

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

7

Calculate:

$$548 + 0 =$$

$$346 - 346 =$$

$$111 \times 0 =$$

$$20 \times 30 =$$

$$50 \times 100 =$$

$$0 + 491 =$$

$$0 + 0 =$$

$$2 \times 0 =$$

$$15 \times 100 =$$

$$25 \times 10 =$$

$$864 - 0 =$$

$$0 - 0 =$$

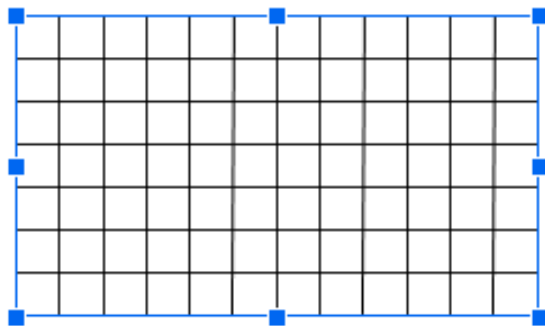
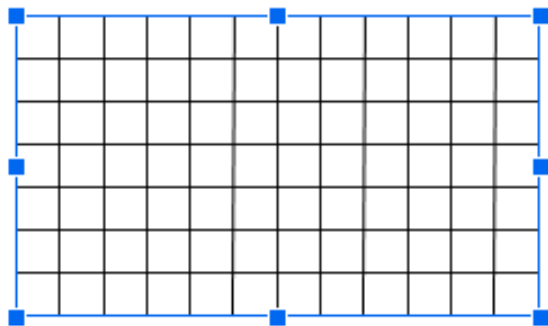
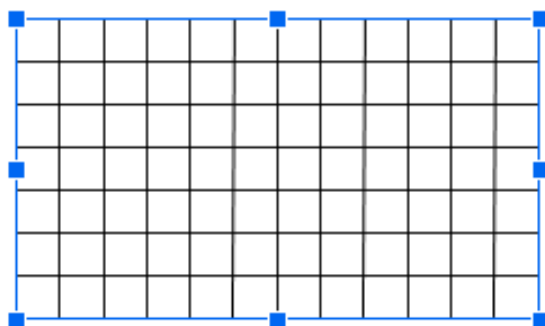
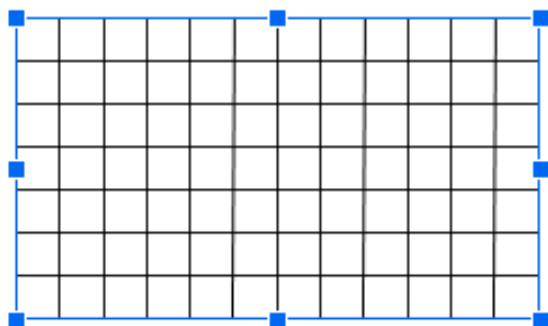
$$0 \times 39 =$$

$$200 \times 2 =$$

$$40 \times 10 =$$

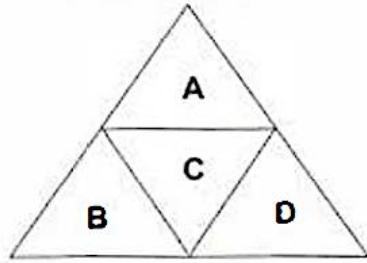
8

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-units triangles: NONE

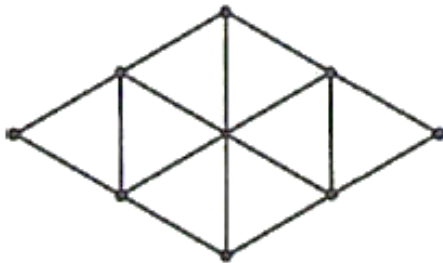
Step 3. Count only triangles, which are formed by 3-units triangles: NONE

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

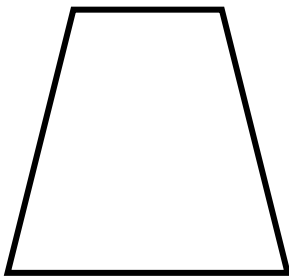
How many triangles are there in the figure below (use a systematic counting method)?



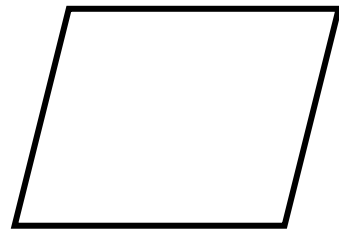
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10

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								
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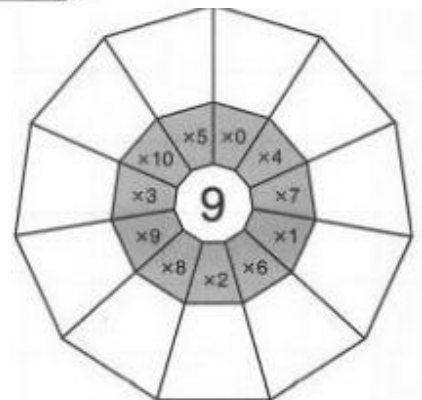
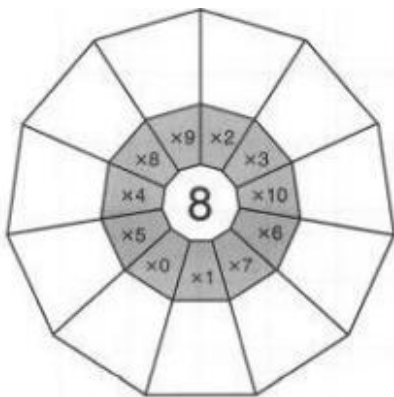
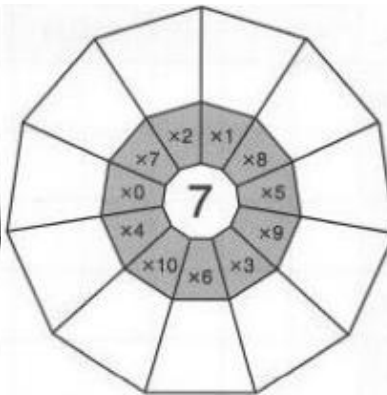
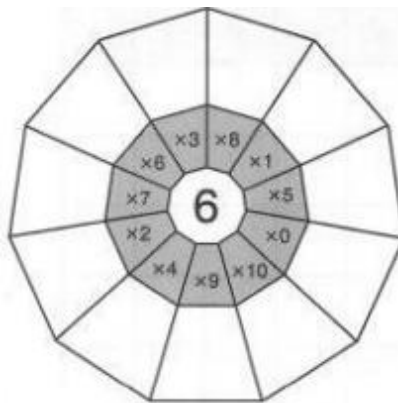
Cecilia:

0	9								
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- Complete each girl's sidewalk pattern.
- How many times greater is Cecilia's number in the 5th box be than Cora's number in the 5th box? \_\_\_\_\_
- What about the numbers in the 8th box? \_\_\_\_\_
- The 10th box? \_\_\_\_\_
- What pattern do you notice in your answers for part b)? Why do you think that pattern exists?  
\_\_\_\_\_
- 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.



HW 9

Multiplication. Angles. Perimeter.

- 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:  
 $n + 5 - 5 =$   
 $16 + n - n =$   
 $a + 10 + a =$