

**1.** Solve each expression using the correct order of operations:

$7 + 2 \times 3 \times 4 =$  \_\_\_\_\_

$7 + 10 \times 5 + 6 =$  \_\_\_\_\_

$10 + 4 \times 2 + 6 =$  \_\_\_\_\_

$7 \times 3 + 2 + 5 =$  \_\_\_\_\_

$6 \times 2 + 4 \times 8 =$  \_\_\_\_\_

$7 + 10(2 + 5) =$  \_\_\_\_\_

$6 \times 8 + 7 + 4 =$  \_\_\_\_\_

$7(6 + 3 + 2) =$  \_\_\_\_\_

**2.** Replace the stars by digits to obtain a correct equality:

a)  $*** - ** = 1$

b)  $*** - ** = 2$

How many solutions can you find for each problem?

---



---



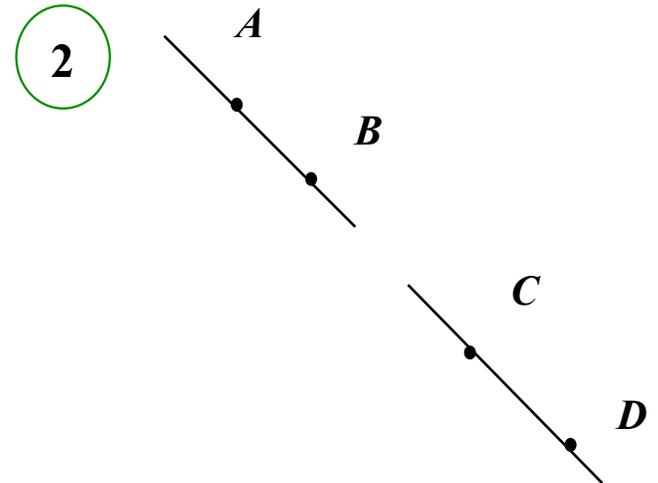
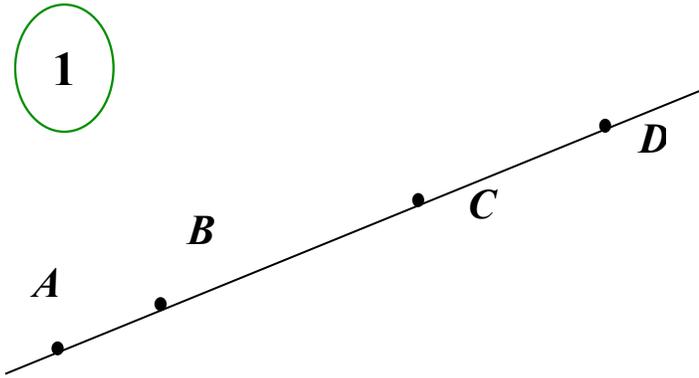
---

**3.** How much time has elapsed between the first and the second time:

First time:	Second time:	Elapsed time:
11 am	1 pm	_____
5:20 pm	6:30 pm	_____
4:40 pm	8:10 pm	_____
3:22 pm	6:15 pm	_____

4.

How many straight lines are in each drawing? How many rays and line segments? Write down each line, ray and segment using correct notations.



5.

Make a list of the first ten multiples of 4.

Which of the numbers in your list are multiples of 6? What pattern do you see in where the multiples of 6 appear in the list?

Which numbers in the list are multiples of 7? Can you predict when multiples of 7 will appear in the list of multiples of 4? Explain your reasoning.

---



---



---

6.

On a business trip in Upstate New York, Mr. Floyd stopped several times to buy gas. He started with a full tank. He filled 12 gallons when he filled up the first time. At his next gas stop, he filled 10 gallons. He stopped at the gas station next to his home and he added 8 gallons to make the tank full again. How many liters of gas did his car use on the trip?

---

7. Calculate:

5. 
$$\begin{array}{r} \$3.28 \\ + \$5.27 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} \$6.98 \\ - \$2.49 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} \$7.03 \\ - \$6.08 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} \$11.00 \\ - \$5.39 \\ \hline \end{array}$$

8. Janelle likes to bake. She has 3 aluminum muffin pans, each of which holds 8 muffins, and 2 cast iron pans, which also hold 8 muffins each. She also has two stainless steel muffin pans, which hold 12 muffins each. If Janelle fills all her muffins pans at once, how many muffins would that be?

9. A hotel has 5 types of rooms depending on the number of beds. The rooms shown on the map are labeled accordingly. Figure out in which rooms Lisa and Tim live?

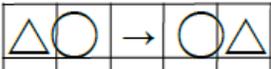
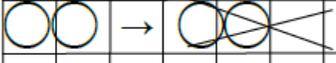
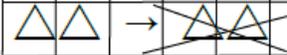
You know that:

- Neither of their rooms is located next the number 3: not to the left, not to the right, not above, not below.
- Both of their rooms are located either to the right or to the left of both the numbers 4 and 1.
- Both of their rooms are located nearby (to the right or left or above or below) of both the numbers 1 and 5.
- Lisa's room is to the left of Tim's room.

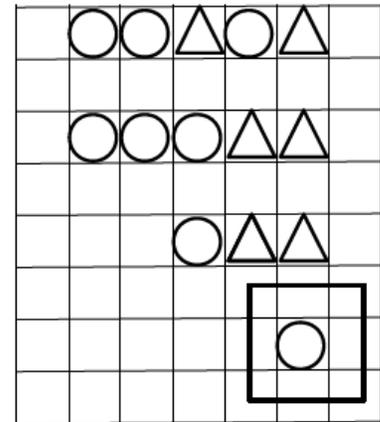
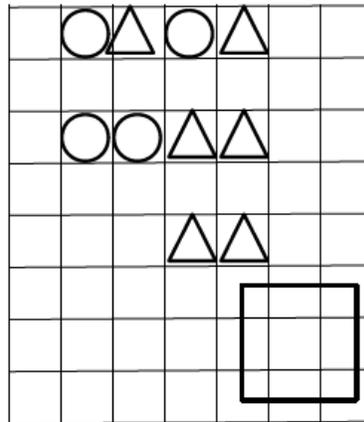
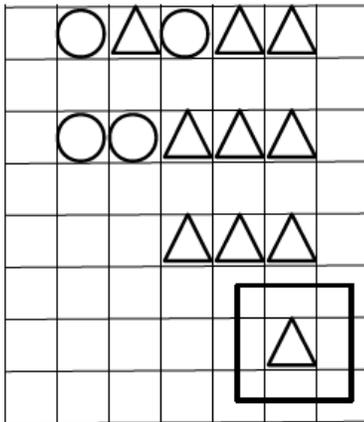
3	2	1	1	4	3	3	5
5	3	4	1	4	3	3	4
1	2	5	4	1	4	1	3
3	2	1	4	1	3	5	4
5	2	2	1	4	3	3	2
4	5	1	4	2	4	5	5
4	2	1	2	4	3	1	3
4	4	1	5	1	3	1	3



Once upon a time the people of a kingdom only wrote using squares and triangles. They were communicating to each other using long words that consisted of squares and triangles. The king became angry and decreed the 3 rules to simplify the writing:

1. 
2. 
3. 

First, rule 1 has to be used as many times as possible, then the same applies to rules 2 and 3. Inspect if the following words were transformed correctly:



Transform the following words using the three royal rules:

