

## Math 4a. Homework 10.

Problems marked with \* are more difficult.



1. Compare:

$$|7 + 3| \quad |7| + |3|$$

$$|7 - 3| \quad |7| - |3|$$

$$|7 - 3| \quad |3 - 7|$$

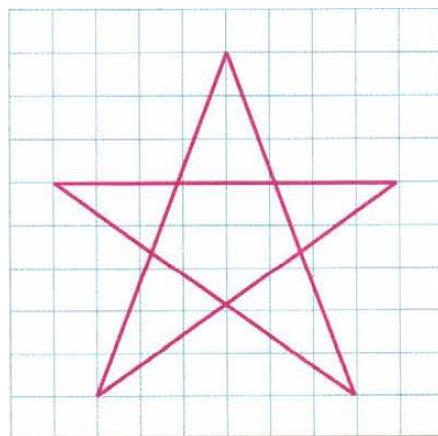
$$|3 - 7| \quad |3| - |7|$$

$$|a - b| \quad |b - a|$$

$$|7 - 3| \quad |7| + |3|$$

$$|3a| \quad 3 \cdot |a|$$

2. Copy the star to your notebook. Use the grid on the page of your notebook and a ruler to draw segments.



3. Half of the students of the class participated in a spellingbee competition. One third of them became winners. How many students are in the class, if there are 5 winners of the spellingbee in the class?

4. Draw the segment  $[AB] = 6$  cm long. Draw

segments which are  $\frac{1}{3}, \frac{5}{6}, \frac{7}{6}, \frac{3}{2}, \frac{5}{3}$  of the length of the segment  $[AB]$ .

5. There were several books on the desk. Julia took half of the books and one more and left 2 books on the desk. How many books were there on the desk?
6. Jane and Mary are planting flowers. Jane can plant all flowers in 2 hours, Mary can do it in 3 hours. How many hours they need to plant all flowers together?
7. Fill the empty spaces:

Example:  $8 + (-5) = 3$

a.  $8 + \dots = 5$

e.  $(-10) + \dots = -5$

b.  $15 + \dots = 0$

f.  $8 - \dots = 12$

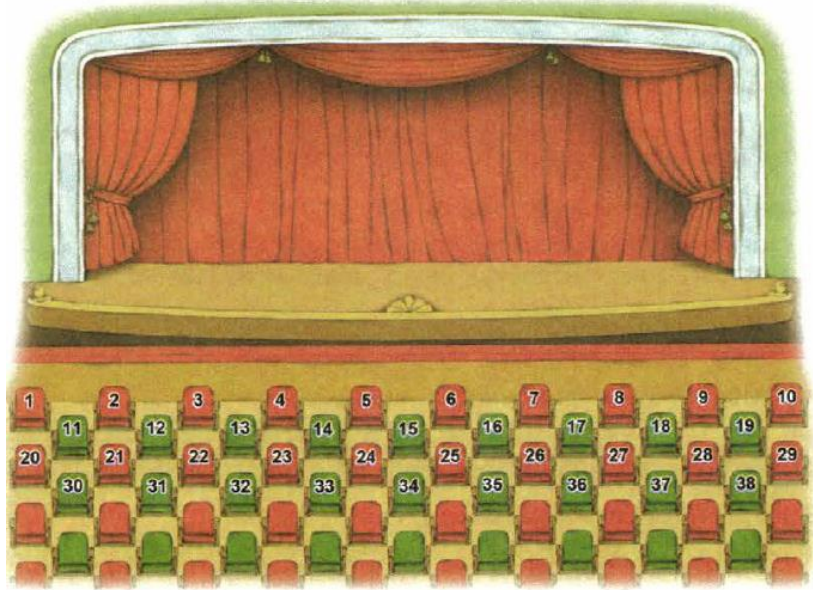
c.  $(-4) + \dots = -6$

g.  $-4 - \dots = 4$

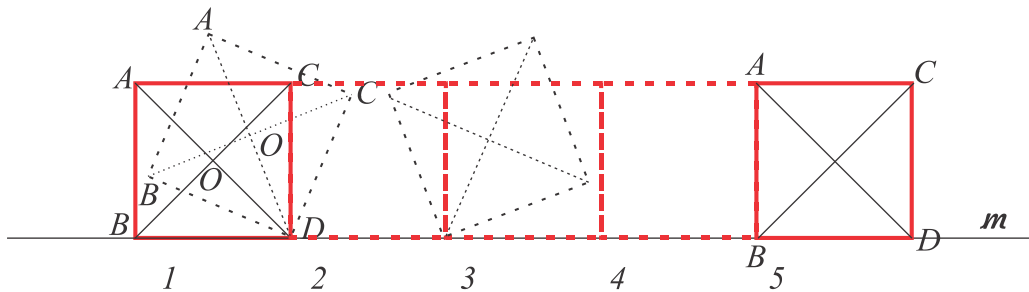
d.  $(-1) + \dots = -1$

h.  $6 - \dots = -2$

8. Peter entered a theater after the show started (see the picture). He took an empty seat. The number of the seat is 195. In which row is this seat located?



9. Use compass to draw the curve that points A and O (the vertex and the intersection of the diagonals of a square) will trace if a square BACD “rolls” along the line  $m$  from the position 1 to position 5. Explain, which points you are using as the centers of circles and which segments you are using as the radii.



Use compass to draw a curve that point A, the vertex of the triangle ABC, will trace if the triangle “rolls” along the line  $h$  from the position 1 to position 4. Explain.

