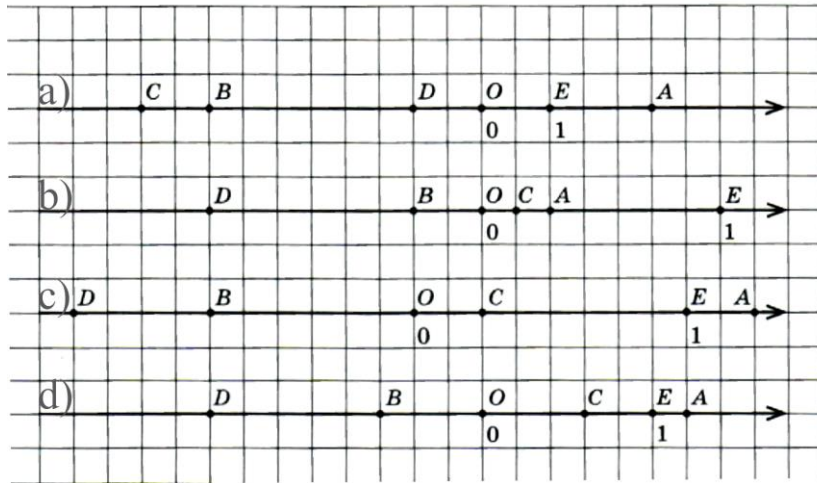


Math 4a. Homework 9.

Problems marked with * are more difficult.



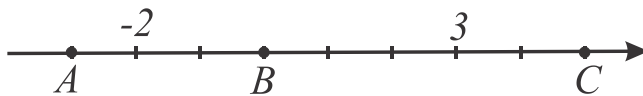
- Write the absolute values of coordinates of points in the picture below.



Example:

a) $O: |0| = 0$, $E: |1| = 1$, $A: \left|2\frac{1}{2}\right| = 2\frac{1}{2}$, $D: |-1| = 1$, $B: |-4| = 4$, $C: |-5| = 5$

- Draw the number line and mark the points with the absolute values of the coordinates equal to 0, 1, 2, 5.
- Write the coordinates of points A, B and C marked on the number line below:



- There were several books on the shelf. On the second shelf, there were 4 times as many books as on the first shelf. When 21 books from the second shelf were moved to the first shelf, the number of books on both shelves became equal. How many books was there on the first shelf?



5. Solve the following equations.

$$x + (-3) = 10$$

$$-8 - y = -14$$

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

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

$$|y + 3| = 7$$

$$\left|x + \frac{2}{3}\right| = \frac{3}{4}$$

6. a and b are both negative numbers and $|a| > |b|$. Compare a and b .

7. Even or odd number are the following sums:

a) $11 + 13 + 15 + 17 + 19 + 21 + 23 + 25 + 27 + 29$;

b) $11 + 15 + 19 + 23 + 27 + 31 + 35$;

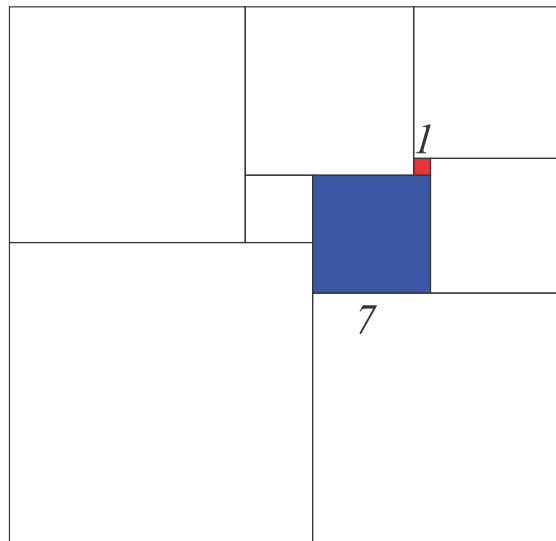
c) $99 + 78 + 97 + 43 + 85 + 64 + 15 + 70$?

8. Even or odd number are the following products:

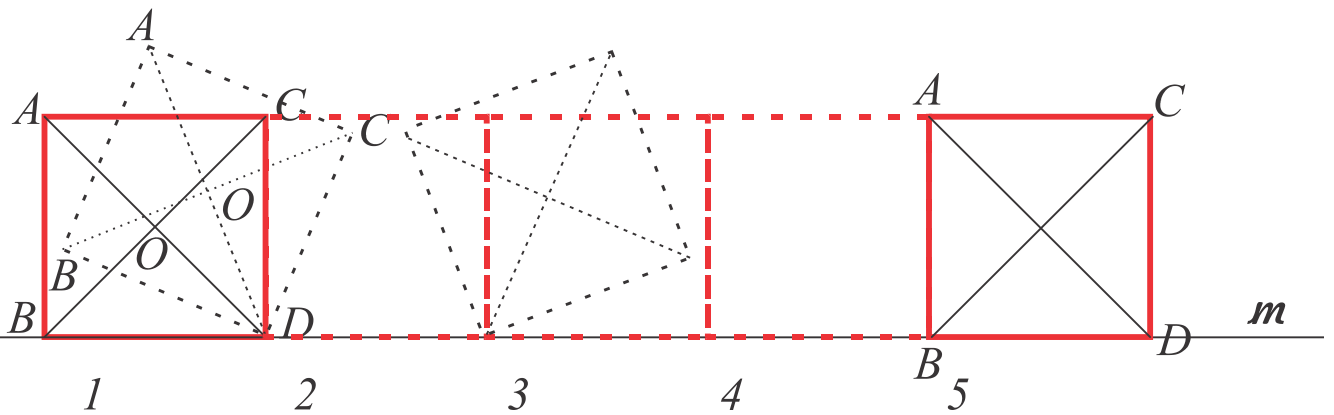
a) $11 \cdot 13 \cdot 15 \cdot 17 \cdot 19$;

b) $11 \cdot 12 \cdot 13$;

9. Big rectangle contains 9 squares. The side of red square is 1 unit; the side of blue square is 7 units. Find sides of all other squares.



10. 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.

