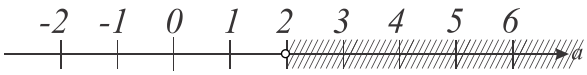
Math 4a. Homework 24.

Problems marked with * are more difficult.

1. Show on a number line the solution of the following inequalities:

   Example:

   $x > 2$

   a. $x \leq 3$;

   b. $y > -50$;

   c. $g \geq \frac{1}{2}$;

   d. $w < 1000$

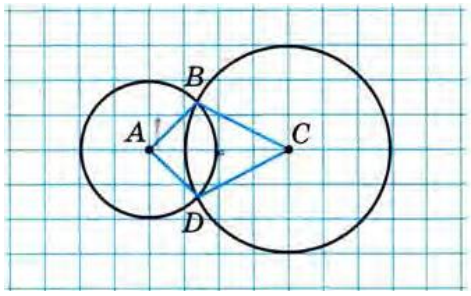
2. *Change the position of one digit such that the equality becomes true:

$$101 - 102 = 1$$

3. It is known that Peter always tells the truth. John asked him the same question twice and got two different answers. What question it can be?

4. Nick and his sister Mary went to their friend Julia's birthday party. After they walked $\frac{1}{4}$ of the distance Nick realized that he forgot the present and turned back home, while Mary continued walking. She arrived at Julia's house 20 minutes after leaving home. How many minutes after Mary did Nick arrive at Julia's house if he walks with the speed as Mary?

5. Find the perimeter of the quadrilateral ABCD if the side of a small square of the grid is 5 mm.



6. Fill in the table.

a	-1	4	10	-8	-4
b	1	-2	2	5	-3
c	3	-6	-5	-6	-2
$a \cdot b \cdot c$					
$(-a) \cdot b \cdot c$					
$(-a) \cdot (-b) \cdot c$					
$(-a) \cdot (-b) \cdot (-c)$					

7. *Number a marked on the number line (see the picture below).
Which of the expression below isn't true?

1) $\frac{1}{a} < -1$ 2) $-\frac{1}{a} > 1$ 3) $\frac{1}{a} < a$ 4) $-\frac{1}{a} < a$

8. Peter measured the time between a lightning and a thunder during the thunderstorm. How far is the Peter's house from the center of the thunderstorm if the time was 6 seconds and speed of sound in the air is 330 m/s?