



1. A musketeer has three beautiful hats, four elegant tabards, and two pairs of excellent boots. How many different costumes can he wear?  
(tabard - a sleeveless jerkin consisting only of front and back pieces with a hole for the head.)

2. There are 10 green and 5 red pencils in the box. Which is the smallest number of the pencils you have to take out of the box, to be sure that you have 2 green pencils? 2 red pencils? 2 pencils of different color? 2 pencils of the same color?

3. There are 10 pairs of socks in a box, all are of different colors. How many socks do you need to take out without seeing their color to be sure that you have at least one pair of socks of the same color?



4. Solve the following equations, mark the answers on a number line, find the coordinate of the midpoint of the segment.

Example:

$$|x - 3| = 7$$

$$x - 3 = 7$$

$$x = 7 + 3 = 10$$

$$x - 3 = -7$$

$$x = -7 + 3 = -4$$



Coordinate of midpoint is 3.

- a.  $|a - 4| = 1$ ;
- b.  $|b - 2| = 3$ ;
- c.  $|c + 1| = 2$ ;
- d.  $|d + 3| = 4$ ;

5. First, write the expression without parenthesis and then evaluate. Check your answer evaluating the same expression with parenthesis:

Example:

$$(5.6 - 7.2) - (-7.2 + 3.4) = 5.6 - 7.2 + 7.2 - 3.4 = 5.6 - 3.4 = 2.2$$

$$(5.6 - 7.2) - (-7.2 + 3.4) = -1.6 - (-3.8) = -1.6 + 3.8 = 2.2$$

a.  $-3.64 - (12.45 - 3.64)$ ;

b.  $\left(2.4 - \frac{2}{3}\right) + 2.4 - \left(1.8 + 1\frac{5}{6}\right)$ ;

c.  $45 - (-7 + 18) - (34 - 18 + 26)$ ;

d.  $-9.7 + (-3.8 + 5.2) - (2.9 - 5.2 - 9.7) + 3.8$ ;

6. I walk from home to school in 30 minutes, and my brother walks in 40 minutes. In how many minutes will I catch up with my brother if he left home 5 minutes earlier than me?
7. Vanya had cookies; he ate some, then Tanya came to visit him, and they shared the remaining cookies equally. It turned out that Vanya ate five times more cookies than Tanya. What share of all the cookies did Vanya eat by the time of Tanya's arrival.