Math 4d, Homework 10.

1. Fill the empty spaces in the table:

c	b	$b \cdot c$
$\frac{3}{8}$	$\frac{3}{4}$	
$\frac{3}{4}$		$\frac{9}{21}$
	$\frac{2}{3}$	$\frac{16}{21}$

c	b	$b : c$
$\frac{5}{6}$	$\frac{4}{9}$	
$\frac{7}{10}$		$\frac{1}{2}$
	$\frac{5}{4}$	$\frac{2}{5}$

2. Find the value of the expressions with given values of variables:
   $a.\ \ 90 - b : 9, \quad if\ b = 0;\ 9;\ 810.$
   $b.\ \ a + 52, \quad if\ \ a = 0; 18; 49.$
   $c.\ \ \ s(15 - s), \quad if\ s = 5; 16; 25.$
   $d.\ \ 240 : d - 4(m + n), \quad if\ d = 1, m = 15, n = 5$

3. Each floor of a residential building has f two-bedroom apartments and g three-bedroom apartments. The building has 5 floors. How many apartments are there in the building? Write the expression, then solve the problem for $f = 3$ and $g = 4$

4. Create a problem, which can be solved by the following expressions, give some values to the variables and solve your problems quantitively:
   $a.\ \ x - y; \qquad b.\ \ c + 3c; \qquad c.\ \ k : 9; \qquad d.\ \ 2m + 2n$

5. Evaluate:

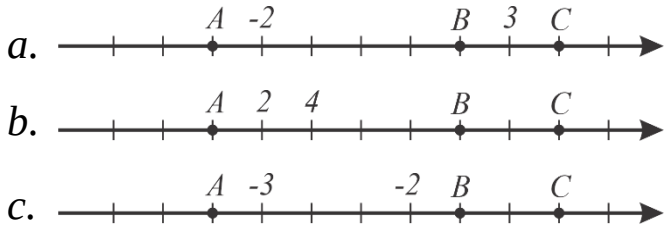
$3 + (-2);$ $3 + (+2);$ $-3 - (-2);$

$3 - (+2);$ $-3 + (-2);$ $-3 + (+2);$

$3 - (-2);$ $-3 - (+2);$ $-3 + (+3);$

6. Positive or negative number will be the product of
   a) Two negative and one positive numbers.
   b) One negative and two positive numbers
   c) Three negative numbers.

7. Write the coordinates of points A, B and C marked on the number lines below:



8. Write without parenthesis:

Example:

$-(-3) = 3;$ $-(+7) = -7$

$a.\ -(+11);$ $b.-(+9);$ $c.\ -(-7);$

$d.\ -(-10);$ $e.-(+15);$ $f.\ -(-20)$

Example:

$-\big(-\big(-(-11)\big)\big) = 11;$ $-\big(-(+7)\big) = +7$

$a.\ -\big(-(+1)\big);$ $b.\ -\big(-\big(-(+8)\big)\big);$ $c.\underbrace{-\big(-(-\cdots(+3)\ldots)\big)}_{10\text{ "- " }signs};$

$d.\ -\big(-(-2)\big);$ $e.\ -\big(-\big(-(-5)\big)\big);$ $c.\underbrace{-\big(-(-\cdots(+3)\ldots)\big)}_{15\text{ "- " }signs};$

9. Write the number in parenthasis so the equality holds:
   $a.\ -(\ldots) = -11;$ $b.\ -(\ldots) = 11;$
   $c.\ -(\ldots) = 86;$ $d.\ -(\ldots) = -71$

10. If b is positive number, $-b$ is _____
11. If b is negative number, $-b$ is _____