

## Math 4. Homework #22



1. Solve:

a.  $-4\frac{2}{3} + \left(-1\frac{1}{3}\right) =$

b.  $-12\frac{5}{7} + \left(-4\frac{4}{7}\right) =$

c.  $\left(-8\frac{2}{3}\right) + \left(-9\frac{2}{3}\right) =$

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



3. In a restaurant you can order a cheese platter for \$15. You can choose 3 different kinds of cheeses out of 15. How many ways are there to create such a cheese platter?

4. I have a choice of 20 new books to read during my 5 day vacation. I want to read 1 book every day. How many ways are there to choose these 5 books? (the order does not matter)

5. There are 20 students in the 4<sup>th</sup> grade math team. How many ways are there to choose a team of 4 students from the class of 20 for the Suffolk County Olympiad?

6. Open the parenthesis and simplify:

$$8(5x-3)=$$

$$5(a+2b+3c)=$$

$$6(3c-5d+6)=$$

$$-3(-2c+3b+4a^2)=$$

$$x^2(5x - 3^6 - x^5) =$$

$$(3 + x)(x - 8) =$$

7. Write the following series of arithmetic operations and find the final answer:

1) Raise  $1\frac{1}{2}$  to the power of 3.

2) From the result of step 1 subtract  $1\frac{3}{4}$ .

3) Divide the resulting difference by  $4\frac{7}{8}$ .

4) Divide  $2\frac{2}{3}$  by  $10\frac{1}{2}$ .

5) Multiply the result of step 4 by  $1\frac{5}{16}$ .

6) Subtract the result of step 5 from the result of step 3

8. On a grid (graph) paper draw the coordinate system. Mark the points A(0;2), B(2;6), C(8;8), D(6,4). Draw the quadrilateral. Find the coordinate of the intersection of the diagonals. Use ruler! Be neat!