Math 4 e. Class work 27.

Review.

1. The segment AB is 48 cm long. It's divided by a point C in a ratio of 3 to 5 (3:5, $|AC| < |AB|$). How long are the both segments, AC and CB?
   What part of the segment AB is the segment AC? What part of the segment CB is the segment AC?

2. Perimeter of a rectangle is 36 cm. What is the area of the rectangle if the ratio of its sides is
   1. 1:5
   2. 1:3
   3. 1:2
   4. 1:1

   How area is changing with this ratio?

3. A driver got ticket for speeding. Driver needs to pay a fine of 100 dollars by June 1st. If the fine is not paid, the total will be increased 2% each day. How much money this driver will pay, if the fine is paid on June 4th?

4. There are 400 students in a middle school. 20% of them are 6th graders, 45% of 6th graders are girls. How many girls are in 6th grade?

5. Write without parenthesis:

   $a.\ -(a-b);$ $b.\ -(c+d);$ $c.-(-x+y);$

   $d.\ d-(-k+t);$ $e.\ -m+(a-c);$ $f.\ p-(-n+r-s);$

   $j.\ c-(b+c-a)+(-a+b);$

   $h.\ (d-m)-b-(-m+x+d)+x;$

   $f.\ k-(y-c)+(d-c-y)+(-k+d);$

6. Prove that for any natural number n the sum of twice the previous number and three times the following number will have a remainder 1upon division by 5.

7. What is the absolute of

   $|-2|;$ $|2|;$ $|-100|;$ $|100|;$ $|-10050|;$ $|10050|$

8. Solve the equations:

   $a.\ |10-x|=5;$ $b.\ |y+20|=25$

   $c.\ 2x+3=17x-27$ $d.\ 2\frac{1}{3}-\left(y-\frac{5}{12}\right)=1.75$

9. Simplify:

   $a.\ 2^4+2^4;$ $b.\ 2^m+2^m;$ $c.\ 2^m\cdot 2^m;$

   $d.\ 3^2+3^2+3^2;$ $e.\ 3^k+3^k+3^k;$ $f.\ 3^k\cdot 3^k\cdot 3^k;$

10. Simplify the expression and find the coefficient:

$a.\ -a\cdot(-b)\cdot(-c)\cdot d;$ $b.\ -x\cdot(-y)\cdot(-n)\cdot(-m)$ $c.\ (-c)^2\cdot(-m)^3$

$d.\ (-c^2)\cdot(-m^3);$ $e.\ (-a)^5\cdot(-b)^4;$ $f.\ (-a^5)\cdot(-b^4)$

11. Can you write without parenthesis

    $(a+b)^2;$