Accelerated math. Homework 18.

Problems marked with ** are very difficult.

1. Evaluate the following expressions (hint: try to use the most efficient way to do it, do some steps using decimals and other using normal fraction):

$$\frac{\left(\frac{1}{6}+0.1+\frac{1}{15}\right):\left(\frac{1}{6}+0.1-\frac{1}{15}\right)\cdot 2.52}{\left(0.5-\frac{1}{3}+0.25-\frac{1}{5}\right):\left(0.25-\frac{1}{6}\right)\cdot\frac{7}{13}};$$

Answer is 3, but you need to show your solution.

2. Represent the following fractions as decimals:

a.
$$\frac{3}{2000}$$
,d. $\frac{7}{4}$;g. $\frac{123}{20}$;b. $\frac{17}{40}$;e. $\frac{3}{2}$;h. $\frac{783}{540}$;c. $\frac{28}{140}$;f. $\frac{9}{5}$;i. $\frac{324}{25}$;

3. Represent the following periodical decimals as fractions.

a.	0. 8;	d.	0.37;
b.	0. 4;	e.	0. 27;
c.	0. 13;	f.	0. 125;

- Triangle ABC is an isosceles tringle. Angle ∠ABC is 36°. The segment AD is a bisector. Prove that tringles ABD and ADC are isosceles triangles.
- 5. **Construct the triangle with 2 sides AB and BC and the median to the third side (BM)





- 6. Chemist has 300 ml of the solution with 0.2 g of salt 1 ml and 200 ml of the solution with 0.5 g of salt in 1 ml. He combined both solutions together. What will be the concentration of the salt in combine solution?
- 7. There are 250 g of cherry jam which has 30 % sugar in it and 300 g of cherry jam with 50 % of sugar in it. Two portion of the confiture were combine together. What is the percent of sugar in the final product?
- 8. Solve the following rquations;

$$7 - x = 0;$$

$$15 - 7x = 0;$$

$$3x - 5 = x;$$

$$3x + 2 = 5x - 7.$$

9. Sum of two natural numberы is 45. First number will give the remainder 4 upon division by 12, second number will give the remainder 5 upon division by 12. What are these numbers?