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. $\frac{3}{2000}$,
b. $\frac{17}{40}$;
c. $\frac{28}{140}$;
d. $\frac{7}{4}$;
e. $\frac{3}{2}$;
f. $\frac{9}{5}$;
g. $\frac{123}{20}$;
h. $\frac{783}{540}$;
i. $\frac{324}{25}$;
3. Represent the following periodical decimals as fractions.
a. $0 . \overline{8}$;
b. $0 . \overline{4}$;
c. $0 . \overline{13}$;
d. $0 . \overline{37}$;
e. $0 . \overline{27}$;
f. $0 . \overline{125}$;
4. Triangle ABC is an isosceles tringle. Angle $\angle \mathrm{ABC}$ is $36^{\circ}$. 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;

$$
\begin{aligned}
& 7-x=0 \\
& 15-7 x=0 \\
& 3 x-5=x \\
& 3 x+2=5 x-7 .
\end{aligned}
$$

9. Sum of two natural numbert 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?
