Math 6c. Homework 2.

1. Evaluate (answer is $\frac{25}{39}$):

$$\frac{\left(\frac{1}{6}+\frac{1}{10}+\frac{1}{15}\right):\left(\frac{1}{6}+\frac{1}{30}\right)}{\left(\frac{1}{6}+\frac{1}{4}-\frac{1}{5}\right):\left(\frac{1}{4}-\frac{1}{6}\right)}$$

2. The mass of a chicken egg is 80 g. The egg white makes up 55% of the total mass, and the yolk is 75% of the mass of the egg white. Find the mass of the eggshell.

3. Evaluate the following using decimals:

$a.\ 0.36+\frac{1}{2};\qquad b.\ 5.8-\frac{3}{4};\qquad c.\ \frac{2}{5}:0.001;\qquad d.\ 7.2\cdot\frac{1}{1000}$

4. Evaluate the following using fractions:

$a.\ \frac{2}{3}+0.6;\qquad b.\ 1\frac{1}{6}-0.5;\qquad c.\ 0.3\cdot\frac{5}{9};\qquad d.\ \frac{8}{11}:0.4;$

5. Write as a fraction

$a.\ 0.\overline{4},\qquad b.\ 0.4,\qquad c.\ 0.\overline{6},\qquad d.\ 0.6,\qquad e.\ 0.1\overline{2},\qquad f.\ 0.\overline{12},\qquad g.\ 0.12$

6. A truck can cover distance between two cities in 10 hours. A fast car, which goes 10 miles per hour faster than the truck, can cover the same distance in 8 hours. What is the distance?

7. Use the distributive property and simplify fractions:

$a.\ \frac{15\cdot 9-15\cdot 6}{9\cdot 30};\qquad b.\ \frac{17\cdot 4+17\cdot 9}{34\cdot 52};\qquad c.\ \frac{18\cdot 7+18\cdot 3}{1200};\qquad d.\ \frac{24\cdot 11-24\cdot 3}{300}$