

# Algebra Workshop

Name: \_\_\_\_\_

## Homework 3

1. Find the prime factorizations of the following numbers:

(a) 36

(b) 28

(c) 330

(d) 365

2. Evaluate:

(a)  $\frac{1}{4} + \frac{1}{8}$

(b)  $\frac{2}{3} - 1$

(c)  $\frac{1}{6} - \frac{1}{9}$

(d)  $\frac{2}{5} + \frac{3}{4}$

(e)  $\frac{1}{3} + \frac{1}{2}$

(h)  $\frac{5}{6} - \frac{3}{2}$

3. Evaluate:

(a)  $\frac{2/5}{3}$

(b)  $\frac{2}{5/3}$

(c)  $\frac{1}{1/2}$

(d)  $\frac{3/8}{9/4}$

4. Evaluate:

(a)  $\frac{\frac{3}{5} - \frac{2}{3}}{2}$

(b)  $\frac{7}{\frac{1}{3} + \frac{1}{4}}$

5. Solve the following problems. Give your answers to 2 decimal places.

(a) What is 60% of 70?

(b) What is 200% of 30?

(c) 30 is 50% of what?

(d) 23 is 10% of what?

(e) What percent of 20 is 5?

(f) What percent of 35 is 7?

6. (a) A bookstore increases all of its prices by 20%. If a book costed \$6.99 before the price increase, how much does it cost after the price increase?

(b) An employee at the bookstore receives a 20% discount. How much will he pay for the book (that originally costed \$6.99)? (Assume that the 20% increase is applied first, and then the 20% discount.)

7. In 1980, a dozen eggs cost 85 cents. In 2005, a dozen eggs cost \$1.35. By what percent, did the price of eggs increase?