

Simplify all answers and show your work! Solutions having an answer only or where the work does not match up with the answer will be marked wrong. This is not a test of your ability to guess!

1) Write  $\frac{7}{8}$  as a decimal.

2) **Simplify:**  $3\frac{2}{5} \cdot 2\frac{1}{2} \div 4\frac{3}{5}$

3) **Simplify:**  $3.6 \div 2.4 \cdot 4.6 + 8.1$

4) Write the following in order from smallest to largest:  
0.038, 0.0331, 0.037, 0.083, 0.033

**Solve for x:**

5)  $\frac{x}{8} = \frac{15}{10}$

6)  $\frac{x}{8.1} = \frac{2.5}{2.7}$

7)  $\frac{2\frac{3}{8}}{3} = \frac{x}{1\frac{1}{3}}$

8) **Write each ratio as a fraction in lowest terms:**

a) 56 to 7      b) \$4.75 to \$2.25      c)  $3\frac{4}{7}$  to  $2\frac{1}{2}$

9) **Write the following as unit rates:**

a) \$17.43 for 7 pounds

b) 121 miles on  $5\frac{1}{2}$  gallons

10) Soda can be purchased as given below.

Which is the best deal on soda?

8 cans for \$3.49

12 cans for \$5.49

20 cans for \$8.99

11) **Convert and write each ratio in lowest terms:**

a)  $2\frac{2}{3}$  yards to 4 feet (1 yd = 3 ft.)

b) 5 pints to 3 quarts (1 quart = 2 pints)

12) Jeff and Helen borrowed \$12,000 from the bank to buy their new car. They make monthly payments of \$285.64 for the next 5 years.

a) How much total money do they end up paying to the bank?

b) How much money over the original borrowed amount do they end up paying the bank?

13) Sara buys items that cost \$23.99, \$15.23, \$5.15, and \$13.81 and pays with three \$20 bills. How much change will Sara get back?

14) Jaquez worked for 28.5 hours during a week. If his hourly rate of pay was \$8.15, how much money did he earn that week?

15) Chris has a board that is 16.8 meters long. He wants to cut the board into pieces that are 2.5 meters long. How many pieces at exactly 2.5 meters long will he get from the large board?

16) An 8.3-oz. can of Red Bull contains 80 mg of caffeine. (**Round your answers to the nearest tenth.**)

a) How much caffeine would 1 ounce of Red Bull contain?

b) How much caffeine would a 12-ounce can of Red Bull contain?

17) A large bottle contains 6.75 L of saline. If Mary splits it into smaller bottles holding 0.75 liters of saline each, how many smaller bottles can be filled with the contents of the large bottle?