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) Divide: \( \frac{2.73}{2.1} \)  
2) Write \( \frac{3}{4} \) as a decimal.  
3) Simplify: \( 3.6 \div 2.4 \cdot 1.6^2 - 2.4 \)

4) Write the following in order from smallest to largest: 0.425, 0.452, 0.514, 0.438, 0.429  
5) Multiply: \( 2.4 \) \( \times 5.1 \)

Solve for x:
6) \( \frac{5}{x} = \frac{16}{24} \)  
7) \( \frac{x}{3.8} = \frac{5.5}{2.2} \)
8) \( \frac{5 \frac{1}{3}}{8} = \frac{x}{4 \frac{2}{5}} \)

9) Write each ratio as a fraction in lowest terms:  
a) 48 to 12  
b) $1.20 to $3.50  
c) \( 7 \frac{1}{5} \) to \( 1 \frac{1}{3} \)

10) Write the following as unit rates:  
a) $4.52 for 4 pounds  
b) 166.2 miles on 6 gallons

11) Determine if the following proportion is true or false. Justify your answer.  
\( \frac{2 \frac{2}{5}}{7 \frac{1}{2}} = \frac{2}{5} \cdot \frac{2}{5} \)

12) A grocery store is selling different sizes of ketchup at the following prices. Which is the best deal?  
10 oz. for $2.49  
16 oz. for $3.19  
24 oz. for $4.79
13) If one vial of medicine holds 10 ml of drug, how many full doses of 1.2 ml are in the vial?

14) A baby is born weighing 8 pounds. How many ounces does the baby weigh?

15) A recipe calls for \( \frac{2}{3} \) cups of sugar and serves 5 people. How many cups of sugar are needed to make 28 servings?

16) A car can go 300 miles on 14.7 gallons of gas. If gas costs $2.10 a gallon, how much will it cost to drive 820 miles? (Round to the nearest cent.)

17) Kerry cuts brackets from a sheet of metal that is 9.5 feet long. Each bracket is 1.25 feet long. How many complete brackets can be cut from this sheet of metal?

18) A car is purchased with a $1500 down payment and monthly payments of $271.74 for five years. How much was the total cost of the car?

19) Kameel’s outdoor grill uses 1.6 pounds of propane per hour. If the tank holds 12.4 pounds of propane, how many hours can the grill run on a full tank of propane?

20) Convert the following:
   a) 4.5 feet = ________ inches       b) 42 cups = ________ quarts