

Simplify all answers and **show your work!** This is not a test of how well you use your calculator!

1) Simplify: $6.93 + 2.3^2 + 18$

2) Simplify: $2.8 \div 0.07 \cdot 0.3$

3) Multiply: $\begin{array}{r} 7.81 \quad \text{_____ places} \\ \times 5.2 \quad \text{_____ places} \\ \hline \end{array}$

_____ places

4) Write as a decimal: $\frac{19}{20}$

5) Subtract: $30 - 23.84$

6) Add: $15.73 + 4.785 + 24$

Write the following ratios or rates as fractions in lowest terms.

7) $2\frac{1}{3}$ to $5\frac{1}{4}$

8) \$1.50 to \$2.40

9) 300 miles on 15 gallons

10) 4 cups to 2 gallons

Solve for x in the following proportions.

11) $\frac{x}{1.5} = \frac{2.6}{0.6}$

12) $\frac{2\frac{1}{3}}{1\frac{2}{5}} = \frac{1\frac{1}{3}}{x}$

13) $\frac{3}{5} = \frac{x}{6}$

14) 66 inches = _____ yards

15) 235 ounces = _____ pounds

16) Twenty feet of lumber cost Jacob \$138.40.
What was the cost per foot for the lumber?

17) In Richmond County, the sales tax rate is \$0.07 tax for every \$1.00 an item costs. How much tax would be charged on a DVD that costs \$24.99?

18) A gas station has cola on sale for 4 cases for \$11. The grocery store up the street has the same cola on sale for 3 cases for \$8.

a) How much does one case from the gas station cost?

b) How much does one case from the grocery store cost?

c) Which place has the better deal on cola?

19) A homeowner's insurance policy costs Jocelyn \$700.92 each year. If her payments are broken down into monthly payments, how much does she pay the insurance company each month?

20) In the past month, the price of gasoline at a local service station has risen \$0.52 to a current cost of \$3.08 per gallon. What was the price of gasoline a month ago?

21) Jermaine and his brother are collecting aluminum cans to raise money for a trip they want to take. A local recycling center pays \$0.75 per pound for aluminum cans. If Jermaine takes in 85 pounds of cans and Jermaine's brother takes in 72 pounds of cans, how much money does this raise for their trip?

22) The dosage of a certain medication is $\frac{1}{4}$ fl. oz. for every 50 pounds of body weight. How many fl. oz. of this medication are required for a person who weighs 175 pounds?

23) An airplane can fly 753 miles in 3 hours. At this rate, how long will it take the airplane to fly 1500 miles?

24) For every 100 pounds a person weighs, about 60 pounds is water. About how many pounds of water is in a person weighing 165 pounds?

25) About $\frac{2}{3}$ of the water used in a home is used in the bathroom. If a family uses a total of 2400 gallons of water in a 30-day month, about how much water is used in the bathroom **each day**?