

WORD PROBLEMS - PERCENTS of NUMBERS**ANSWERS**

1. Biff and Sam went out to dinner. Before tax and tip the food cost \$56.00. The tax rate is 7.5% and they want to leave a 15% tip. Both amounts are based on the cost of the food. How much will the entire dinner cost?

$$\begin{aligned} 7.5\% \text{ of } \$56 &= .075 \times \$56 = \$4.20 \text{ tax} \\ 15\% \text{ of } \$56 &= .15 \times \$56 = \$8.40 \text{ tip} \\ \$56 + \$4.20 + \$8.40 &= \mathbf{\$68.60 \text{ total}} \end{aligned}$$

3. Andy and Tom bought a pizza for \$13.25 plus tax. If the tax rate is 8%, what is the total price of the pizza?

$$\begin{aligned} 8\% \text{ of } \$13.25 &= .08 \times \$13.25 = \$1.06 \text{ tip} \\ \$13.25 + \$1.06 &= \mathbf{\$14.31 \text{ total}} \end{aligned}$$

5. Bruce can kick a football 35 yards in the air. Vicky can kick one 20% further than him. How far can Vicky kick a football?

$$\begin{aligned} 20\% \text{ of } 35 \text{ yards} &= .20 \times 35 = 7 \text{ yards more} \\ 35 + 7 &= \mathbf{42 \text{ yards in the air}} \end{aligned}$$

7. Farlow's basketball team plays two games per week. Their season last ten weeks. They need to win 80% of their games to make it to the playoffs. How many games do they need to win?

$$\begin{aligned} 2 \times 10 &= 20 \text{ total games.} \\ 80\% \text{ of } 20 \text{ games} &= .80 \times 20 = \mathbf{16 \text{ games}} \end{aligned}$$

2. Lacey runs twelve miles on Monday. Jarred runs the same distance, but separates it out into two days. He runs 40% of the distance on Monday and 60% on Wednesday. How far does he run each day?

$$\begin{aligned} .40 \times 12 &= \mathbf{4.8 \text{ miles on Monday}} \\ .60 \times 12 &= \mathbf{7.2 \text{ miles on Wednesday}} \end{aligned}$$

4. Shelza has \$20.00 and wants to buy two skirts. The skirts normally cost \$13.99 each, but are on sale for 25% off. Does she have enough money to buy both skirts?

$$\begin{aligned} 25\% \text{ of } \$13.99 \text{ is about } .25 \times \$14.00 &= \$3.50 \\ \$14.00 - \$3.50 &= \$10.50 \times 2 = \mathbf{\$21.00} \\ \mathbf{\text{so no she will not have enough}} \end{aligned}$$

6. Barney received an 75% on his English test. If there were 44 questions, how many did he get correct?

$$75\% \text{ of } 44 \text{ questions} = .75 \times 44 = \mathbf{33 \text{ correct}}$$

8. It takes Harriet 5 hours to clean the garage. It takes her brother 10% longer to do the same job. How many minutes longer does it take her brother?

$$\begin{aligned} 10\% \text{ of } 5 &= .10 \times 5 = .5 \text{ hours} \\ .5 \text{ hours} \times 60 \text{ minutes} &= \mathbf{30 \text{ minutes or}} \\ \mathbf{1/2 \text{ an hour is } 30 \text{ minutes}} \end{aligned}$$