

Name: _____ HW# 4

In each word problem, (1) ^{define a variable} create a let statement, (2) write an equation, (3) solve the equation, (4) write the solution, (5) write a sentence answering the question, (6) make sure your answer makes sense.

- 1.) Mrs. Smith rented a moving van for \$120 plus \$0.15 per mile. Her bill was \$132. How many miles did Mrs. Smith drive the van?

$m = \# \text{ miles}$

$$\begin{array}{r} 0.15m + 120 = 132 \\ - 120 \quad - 120 \\ \hline 0.15m = 12 \\ \frac{0.15m}{0.15} = \frac{12}{0.15} \end{array}$$

$m = 80$

She drove 80 miles

- 2.) The cost to join the Roslyn Country Club is \$1500 a year. This cost includes an initiation fee of \$300 that is due before the facilities can be used. The rest of the cost is split into 12 monthly payments. Find the cost of each monthly payment.

$m = \text{monthly payment cost}$

$$\begin{array}{r} 12m + 300 = 1500 \\ - 300 \quad - 300 \\ \hline 12m = 1200 \\ \frac{12m}{12} = \frac{1200}{12} \end{array}$$

$m = 100$

Each payment is \$100

- 3.) Tickets to the Z100 Jingle Ball concert are on sale for \$24 each. There is also a \$5 handling fee for the order. You ordered some tickets for you and your friends, and the bill came out to \$173. How many total people are going to the concert? How many friends are going to the concert with you?

$x = \# \text{ of people}$

$$\begin{array}{r} 24x + 5 = 173 \\ - 5 \quad - 5 \\ \hline 24x = 168 \\ \frac{24x}{24} = \frac{168}{24} \end{array}$$

$x = 7$

7 people are going to the concert
6 friends are going with you

- 4.) You bought four of the same greeting card and received \$1.44 in change. How much was each card if you gave the cashier a \$10 bill?

$c = \text{cost of each card}$

$$\begin{array}{r} 4c + 1.44 = 10.00 \\ - 1.44 \quad - 1.44 \\ \hline 4c = 8.56 \\ \frac{4c}{4} = \frac{8.56}{4} \end{array}$$

$c = 2.14$

Each card was \$2.14

- 5.) Elisa is planning a vacation that will cost \$2,755. She has already saved \$895. She is saving \$60 a week from her paycheck to put towards the trip. How many weeks will it take Elisa to have enough money for the trip?

$w = \# \text{ weeks}$

$$\begin{array}{r} 60w + 895 = 2755 \\ - 895 \quad - 895 \\ \hline 60w = 1860 \\ \frac{60w}{60} = \frac{1860}{60} \end{array}$$

$w = 31$

It will take Elisa 31 weeks