

Answer

1. E. -160

$$(25)^0 - (-2)^4 + (-3^4) - (-8)^2 = ?$$

$$1 - (+16) + (-81) - (+64) =$$

$$1 - 16 - 18 - 64 = -160 \checkmark$$

2. A. -75

$$-2^2 - (-9)^2 - (-3^2) + 15^0 = ?$$

$$-4 - (+18) - (-9) + 1 =$$

$$-4 - 18 + 9 + 1 =$$

$$-85 + 9 + 1 =$$

$$-76 + 1 = -75 \checkmark$$

3. D. 3750

Of $\rightarrow x$

Is $\rightarrow =$

20% of 30% of X is 225

$$20\% \times 30\% \times X = 225$$

$$0.2 \times 0.3 \times X = 225$$

$$0.06X = 225$$

$$X = 225/0.06$$

$$X = 3750 \checkmark$$

4. B. the area is 4 times its original. Let n be the sides of the square perimeter

$$n \times n = \text{area}$$

$$(n^2)/(n+n+n+n) = X/(n+n+n+n)^2$$

$$(n^2)(4n)^2 = X (4n)$$

$$[(n^2)(4n)^2]/(4n) = X$$

$$(n^2)(4n) = X$$

Therefore, if the perimeter of a square is doubled, the area is 4 times its original.

5. C. 10,000

One fourth percent of a number is 25.

Q: what is a number?

NOTE:

of $\rightarrow$ "x"

Is $\rightarrow$ "="

Let n be our number

Solution:

One fourth percent $\rightarrow \frac{1}{4}\%$

Of a number $\rightarrow \times n$

Is 25 $\rightarrow = 25$

Then combine for a new equation:

$$\frac{1}{4}\% \times n = 25$$

Convert $\frac{1}{4}\%$ to plain fraction

$$\frac{1}{4}\% \div 100\% =$$

$$\frac{1}{4}\% \times \frac{1}{100} = \frac{1}{400} \text{ or } 0.0025$$

Convert $\frac{1}{4}\%$ to decimal

$$\frac{1}{4}\% = 0.25\% \text{ PERCENT}$$

$$0.25\% \div 100\% = 0.0025$$

Now, let's proceed:

$$\frac{1}{4}\% \times n = 25$$

$$0.0025 n = 25$$

$$n = 25/0.0025$$

$$n = 10,000$$

Checking:

$$\frac{1}{4}\% \times n = 25$$

$$\frac{1}{4}\% \times 10,000 = 25$$

$$0.0025 \times 10,000 = 25$$

$$25 = 25$$

$$4 + 3 = 7$$

$$56 \div 7 = 8$$

$$4 \times 8 = 32 \div 2 = 16\text{cm} \checkmark$$

$$3 \times 8 = 24 \div 2 = 12\text{cm}$$

50. C. 11

Four consecutive integers could be represented as n , $n+1$, $n+2$, $n+3$

Therefore, by saying that they have a mean of 9.5, we mean to say:

$$(n + n+1 + n+2 + n+3)/4 = 9.5$$

$$(4n + 6)/4 = 9.5$$

$$4n + 6 = 9.5(4)$$

$$4n = 38 - 6$$

$$4n = 32$$

$$n = 32/4$$

$$n = 8$$

Therefore, the largest value is

$$n + 3 =$$

$$8 + 3 = 11$$

51. B. 28

A baseball pitcher won 80% of the games he pitched. If he pitched 35 ballgames, how many games did he win? 80% of 35 won the game

$$0.8 \times 35 = 28 \checkmark$$

52. C. 75%

Jerry, an electrician, worked 9 months out of the year. What percent of the year did he work?

9 is what percent of 12

$$9 = n \times 12$$

$$9/12 = n$$

$$0.75 = n$$

$$0.75 \times 100\% = 75\% \checkmark$$

53. A. 60%

There are 40 students in a class. Sixteen of those students are boys. What percent of the class are girls?

$$B + G = 40$$

$$16 + G = 40$$

$$G = 40 - 16$$

$$G = 24$$

24 is what percent of 40

$$24 = n \times 40$$

$$24/40 = n$$

$$0.6 = n$$

$$0.6 \times 100\% = 60\% \checkmark$$

54. D. 80%

Analie took a math test and got 48 correct and 12 incorrect answers. What was the percentage of correct answers?

$$48 + 12 = 60$$

48 is what percent of 60

$$48 = n \times 60$$

$$48/60 = n$$

$$0.8 = n$$

$$0.8 \times 100\% = 80\% \checkmark$$

55. B. 250%

120 is what percent of 48?

$$120 = n \times 48$$

$$120/48 = n$$

$$2.5 = n$$

$$2.5 \times 100\% = 250\% \checkmark$$

56. D. 60

120% of what number is 72?

$$120\% \times n = 72$$

$$1.2 \times n = 72$$

$$n = 72/1.2$$

$$n = 60 \checkmark$$

57. C. 30

10% of 300 is what number?

$$10\% \times 300 = n$$

$$0.1 \times 300 = n$$

$$30 = n \checkmark$$