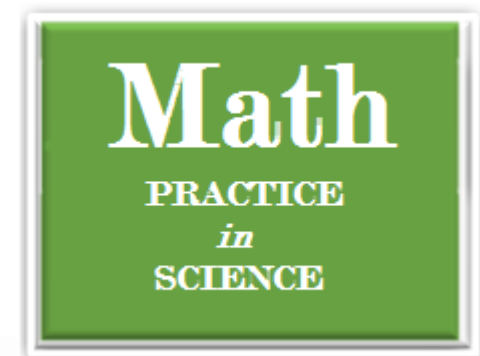


073 Math Practice



Percentage of a Number

We can use mathematics to find out what a certain percent of a number is. This percentage is found by multiplying the base times the rate.

Example: What is 20% of 60?

RATE x BASE = PERCENTAGE

Step 1: Identify the rate. The rate is the number followed by the % sign.
Change the rate to a decimal. $20\% = .2$

Step 2: Identify the base. The base is also called the whole. 60

Step 3: Multiply the rate times the base. $.2 \times 60 = 12.0$

Step 4: Your answer is the percentage. $20\% \text{ of } 60 = 12$

Example: What is 16% of 42?

Step 1: $16\% = .16$

Step 2: $.16 \times 42$

Step 3: $16\% \text{ of } 42 = 6.72$

$$\begin{array}{r} 42 \\ \times .16 \\ \hline 252 \\ 42 \\ \hline 6.72 \end{array}$$

Find the percentages. Change the rate to a decimal.

- 30% of 42 is _____.
- 6% of 20 is _____.
- 72% of 45 is _____.
- 36% of 40 is _____.
- _____ is 20% of 35.
- .4% of 15 is _____.
- _____ is 29% of 80.
- _____ is 5% of 48.
- _____ is 75% of 64.

Another way to find a percentage is to change the rate (or percent) to a fraction before you multiply.

Examples: What is 6% of 25?

Step 1: $6\% = \frac{6}{100}$

Step 2: $\frac{6}{100} \times 25 = \frac{6}{4}$
 $\frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$

Step 3: 6% of 25 is $1\frac{1}{2}$.

What is 3% of 20?

$3\% = \frac{3}{100}$

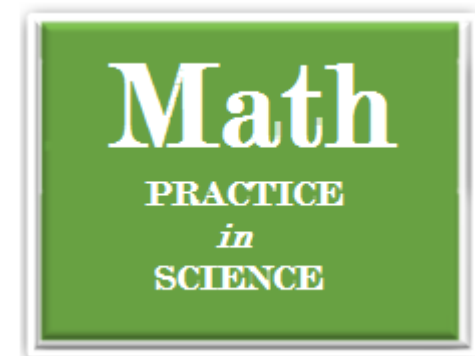
$\frac{3}{100} \times 20 = \frac{3}{5}$

$\frac{3}{5}$ is 3% of 20.

Find the percentages. Change the rate to a decimal.

- 36% of 75 is _____.
- 8% of 95 is _____.
- 80% of 62 is _____.
- 6% of 50 is _____.
- 20% of 35 is _____.
- _____ is 40% of 28.
- _____ is 5% of 60.
- 85% of 200 is _____.
- _____ is 25% of 8.

074 Math Practice



Discounts

Sometimes salespeople will deduct an amount from the selling price of an item. This discount is the amount that you can save. Multiply the list price times the rate of discount to find the discount.

$$\text{LIST PRICE} \times \text{RATE OF DISCOUNT} = \text{DISCOUNT}$$

Example: The list price of a sweater is \$45.65. The rate of discount is 9 percent. How much is the discount?

Step 1: Change the rate to a decimal or fraction. $9\% = .09$

$$9\% = \frac{9}{100}$$

Step 2: Multiply rate x base.

$$.09 \times \$45.65$$

$$\frac{9}{100} \times \$45.65 = \frac{410.85}{100}$$

$$\begin{array}{r} \$45.65 \\ \times .09 \\ \hline \end{array}$$

$$4.1085$$

Step 3: The discount is \$4.11.

$$4.1085 = 4.11$$

$$4.1085 = 4.11$$

When working with money, always round your answer to the next highest cent.

Find the discounts on the various items.

1. Pair of pants
List Price \$24.95
Rate of Discount 20%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

2. Television set
List Price \$245.00
Rate of Discount 15%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

3. Lawn mower
List Price \$145.90
Rate of Discount 12.5%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

4. Shirt
List Price \$24.35
Rate of Discount 25%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

5. Radio
List Price \$24.00
Rate of Discount 8%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

6. Belt
List Price \$18.49
Rate of Discount 2.5%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

7. Wallet
List Price \$40.80
Rate of Discount 23.3%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

8. Stereo system
List Price \$1,229
Rate of Discount 16%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

9. Sunglasses
List Price \$15.00
Rate of Discount 15%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

10. Leather jacket
List Price \$185.00
Rate of Discount 30%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

11. Bicycle
List Price \$85.50
Rate of Discount 35%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

12. Bedsheets
List Price \$23.80
Rate of Discount 40%

$$\text{DISCOUNT} = \underline{\hspace{2cm}}$$

NOTE: Scientists and other professionals in a scientific or healthcare related job make purchases. Purchases may be for lab operations or general office supplies. Practice with discounts is important for all professionals.