

Try These

1. Find 65% of 50.
2. What percent of 40 is 25?
3. 18 is 30% of what number?
4. What percent of 25 is 15?
5. 15 is 75% of what number?
6. Find 90% of 72.
7. 25 is what percent of 40?
8. What percent of 50 is 40?
9. Find 35% of 70.
10. 12 is what percent of 20?

SOLUTIONS:

$$\begin{aligned} 1. \quad P &= R \cdot B \\ &= 65\% \cdot 50 \\ &= 0.65 \cdot 50 \\ &= 32.5 \end{aligned}$$

$$\begin{aligned} 2. \quad R &= \frac{P}{B} \\ &= \frac{25}{40} \\ &= 0.625 = 62.5\% \end{aligned}$$

$$\begin{aligned} 3. \quad B &= \frac{18}{30\%} \\ &= \frac{18}{0.30} \\ &= 60 \end{aligned}$$

$$\begin{aligned} 4. \quad R &= \frac{P}{R} \\ &= \frac{15}{25} \\ &= 0.6 = 60\% \end{aligned}$$

$$\begin{aligned} 5. \quad B &= \frac{15}{75\%} \\ &= \frac{15}{0.75} \\ &= 20 \end{aligned}$$

$$\begin{aligned} 6. \quad P &= R \cdot B \\ &= 90\% \cdot 72 \\ &= 0.90 \times 72 \\ &= 64.8 \end{aligned}$$

$$\begin{aligned} 7. \quad R &= \frac{25}{40} \\ &= 0.625 = 62.5\% \end{aligned}$$

$$\begin{aligned} 8. \quad R &= \frac{P}{B} \\ &= \frac{40}{50} \\ &= 0.80 = 80\% \end{aligned}$$

$$\begin{aligned} 9. \quad P &= R \cdot B \\ &= 35\% \cdot 70 \\ &= 0.35 \cdot 70 \\ &= 24.5 \end{aligned}$$

$$\begin{aligned} 10. \quad R &= \frac{P}{B} \\ &= \frac{12}{20} \\ &= 0.6 = 60\% \end{aligned}$$

Try These

1. In a local hospital, there are 80 nurses. If 15% of them are males, how many of the nurses are males?
2. Sean weighed 175 pounds before he lost 28 pounds. Find the percent of his weight loss.
3. The City Garage inspected 110 automobiles. If 90% of them passed, find the number of automobiles that passed.
4. A person paid a 6% sales tax of \$29.70 on the purchase of an oven. Find the cost of the oven.
5. In a psychology class, 18% of the students are math majors. If there are 50 students in the class, how many of the students are non-math majors?
6. On an 80-point exam, a student had a score of 70%. How many questions did the student miss?
7. A person bought a classic automobile for \$9600 and sold it later for \$12,000. What was the percent profit?
8. A video game cost \$32 and was discounted \$4. What was the discount rate?
9. In a high school, there were 18 male instructors and 32 female instructors. What percent of the instructors are female?
10. An alcoholic beverage comes in 32 ounce bottles and is labeled 10.5% alcohol. How much of the drink is alcohol?

SOLUTIONS:

1. $P = R \times B$

$$P = 15\% \times 80 = 0.15 \times 80 = 12$$

2. $R = \frac{P}{B}$

$$R = \frac{28}{175} = 0.16 = 16\%$$

3. $P = R \times B$

$$P = 90\% \times 110 = 0.90 \times 110 = 99$$

4. $B = \frac{P}{R}$

$$B = \frac{\$29.70}{6\%} = \frac{\$29.70}{0.06} = \$495$$

5. $P = R \times B$

$$P = 18\% \times 50 = 0.18 \times 50 = 9; 50 - 9 = 41$$

6. $P = R \times B$

$$P = 70\% \times 80 = 0.70 \times 80 = 56; 80 - 56 = 24$$

7. $\$12,000 - \$9600 = \$2400$

$$R = \frac{P}{B}$$

$$R = \frac{\$2400}{\$9600} = 0.25 = 25\%$$

8. $R = \frac{P}{B}$

$$R = \frac{\$4}{\$32} = 0.125 = 12.5\%$$

9. $18 + 32 = 50$

$$R = \frac{P}{B}$$

$$R = \frac{32}{50} = 0.64 = 64\%$$

10. $P = R \times B$

$$P = 10.5\% \times 32 = 0.105 \times 32 = 3.36 \text{ ounces}$$