Percentage Determination Practice

Name: _____ Date: _____

Question 1

Solve the percentage problems

I. Willow learns her favorite drink, an Orange Raspberry Double Iced Rush, is 50% off today. If the drink normally costs $2.55, how much does it cost today?

II. A business owner determines that his business has had a 15% decrease in profit compared to last year. If the profit from the previous year was $37,000, what is the profit this year?

III. Lacy takes a class where homework makes up 100% of her grade. In this class, 270 points can be earned. To pass this class, a score of 168 points is required. If Lacy correctly completes 68% of her homework, can she pass the class?

Percentage Determination Practice

IV. What percentage of months do September, October, and November make up?

V. A scientist studying variations in plants must determine the percentage of yellow-spotted plants grown in a laboratory. If 5 red-spotted plants, 80 spotless plants, 10 blue-spotted plants, and 5 yellow-spotted plants are grown, what percentage of plants have yellow spots?

VI. Presley, a civil engineer, measures a panel to be thirty and one-half inches. If she wants to cut the panel to 60% of its original size, how many inches is the new panel?

Percentage Determination Practice

Name: **Key** Date: _____

Question 1

Solve the percentage problems

I. Willow learns her favorite drink, an Orange Raspberry Double Iced Rush, is 50% off today. If the drink normally costs $2.55, how much does it cost today?

$$\frac{50\%}{100\%} = 0.50$$

$$\begin{array}{r} 0.5 \\ \times\ 2.55 \\ \hline \end{array} \quad \begin{array}{l} \longleftarrow 1 \text{ decimal} \\ \longleftarrow 2 \text{ decimal} \end{array}$$

$$\begin{array}{r} 05. \\ \times\ 255. \\ \hline 25. \\ 250. \\ +\ 1000. \\ \hline 1275. \end{array}$$

decimal movement (3) → 1.275

Answer: $1.28

II. A business owner determines that his business has had a 15% decrease in profit compared to last year. If the profit from the previous year was $37,000, what is the profit this year?

$$\frac{15\%}{100\%} = 0.15$$

$$\begin{array}{r} \$37,000. \\ -\ \$5,550. \\ \hline \$31,450. \end{array}$$

$$\begin{array}{r} 0.15 \\ \times\ 37,000. \\ \hline \end{array} \quad \begin{array}{l} \longleftarrow 2 \text{ decimal} \\ \longleftarrow 0 \text{ decimal} \end{array}$$

$$\begin{array}{r} 15. \\ \times\ 37,000. \\ \hline 0. \\ 00. \\ 000. \\ 105,000. \\ +\ 450,000. \\ \hline 555,000. \end{array}$$

decimal movement (2) → 5,550.00

Answer: $31,450

III. Lacy takes a class where homework makes up 100% of her grade. In this class, 270 points can be earned. To pass this class, a score of 168 points is required. If Lacy correctly completes 68% of her homework, can she pass the class?

$$\frac{68\%}{100\%} = 0.68$$

$$183.6 \boxed{>} 168$$

$$\begin{array}{r} 0.68 \\ \times\ 270. \\ \hline \end{array} \quad \begin{array}{l} \longleftarrow 2 \text{ decimal} \\ \longleftarrow 0 \text{ decimal} \end{array}$$

$$\begin{array}{r} 68. \\ \times\ 270. \\ \hline 0. \\ 4,760. \\ +\ 13,600. \\ \hline 18,360. \end{array}$$

decimal movement (2) → 183.60

Answer: Yes, Lacy will pass the class if she correctly completes 68% of her homework.

Percentage Determination Practice

IV. What percentage of months do September, October, and November make up?

$$\begin{array}{r} 0.25 \\ 12\overline{)\,3.00} \\ -\,24\downarrow \\ \hline 60 \\ -\,60 \\ \hline 0 \end{array}$$

$0.25 \cdot 100\% = 25\%$

Answer: 25%

V. A scientist studying variations in plants must determine the percentage of yellow-spotted plants grown in a laboratory. If 5 red-spotted plants, 80 spotless plants, 10 blue-spotted plants, and 5 yellow-spotted plants are grown, what percentage of plants have yellow spots?

$$\begin{array}{r} 0.05 \\ 100\overline{)\,5.00} \\ -\,500 \\ \hline 0 \end{array}$$

$0.05 \cdot 100\% = 5\%$

Answer: 5%

VI. Presley, a civil engineer, measures a panel to be thirty and one-half inches. If she wants to cut the panel to 60% of its original size, how many inches is the new panel?

$30\ \frac{1}{2} \longrightarrow \frac{61}{2}$

$$\begin{array}{r} 30.5 \\ 2\overline{)\,61.0} \\ -\,6\downarrow\downarrow \\ \hline 010 \\ -\,10 \\ \hline 0 \end{array}$$

$$\begin{array}{rl} 0.6 & \longleftarrow 1 \text{ decimal} \\ \times\ 30.5 & \longleftarrow 1 \text{ decimal} \\ \hline \downarrow & \\ 6. & \\ \times\ 305. & \\ \hline 30. & \\ 00. & \\ +\ 1{,}800. & \\ \hline 1{,}830. & \end{array} \quad \xrightarrow{\text{decimal movement (2)}} \quad 18.30$$

$\frac{60\%}{100\%} = 0.60$

Answer: 18.3 inches