

Name:

Date:

Period:

Represent each using an algebraic expression.

1. If Nick has x dollars and his brother Kevin has three times as much, express algebraically how much money Kevin has.

$$\begin{aligned} x &= \$ \text{ Nick has} \\ \underline{\hspace{2cm}} &= \$ \text{ Kevin has} \end{aligned}$$

2. Represent the cost of 5 pencils that cost c cents each.

$$\begin{aligned} c &= \text{cost of one pencil} \\ \underline{\hspace{2cm}} &= \text{cost of 5 pencils} \end{aligned}$$

3. An orange costs c cents. Represent the cost of a dozen oranges.

$$\begin{aligned} \underline{\hspace{2cm}} &= \text{cost of one orange} \\ \underline{\hspace{2cm}} &= \text{cost of a dozen oranges} \end{aligned}$$

4. A hat costs \$4. Represent in dollars the cost of h hats.

$$\begin{aligned} \underline{\hspace{2cm}} &= \text{cost of one hat} \\ \underline{\hspace{2cm}} &= \text{cost of } h \text{ hats} \end{aligned}$$

5. If Peter weighs x pounds, represent his weight after he gains 10 pounds.

$$\begin{aligned} x &= \text{Peter's weight} \\ \underline{\hspace{2cm}} &= \text{Peter's weight after he gains 10 pounds} \end{aligned}$$

6. If Sara weighs m pounds, represent her weight after she loses 5 pounds.

$$\begin{aligned} m &= \text{Sara's weight} \\ \underline{\hspace{2cm}} &= \text{Sara's weight after she loses 5 pounds} \end{aligned}$$

7. Ellen is y years old now. Represent her age 2 years from now.

$$\begin{aligned} y &= \text{Ellen's age now} \\ \underline{\hspace{2cm}} &= \text{Ellen's age 2 years from now} \end{aligned}$$

8. The width of a rectangle is x feet. Represent its length in feet if the length is 8 times the width.

$$\begin{aligned} x &= \text{width} \\ \underline{\hspace{2cm}} &= \text{length} \end{aligned}$$

9. The length of a rectangle is y inches. Represent its width if the width is 3 less than the length.

$$\begin{aligned} y &= \text{length} \\ \underline{\hspace{2cm}} &= \text{width} \end{aligned}$$

10. If 3 pencils cost x cents, represent in cents the cost of one pencil.

$$\begin{aligned} x &= \text{cost of 3 pencils} \\ \underline{\hspace{2cm}} &= \text{cost of one pencil} \end{aligned}$$

Write an equation defining x = the number as the variable and solve. Write your answer as a statement.

1. If three times a number is increased by 15, the result is 36. Find the number.
Let x = the number

$$\text{The number is } \underline{\hspace{2cm}}.$$

2. If 4 times a number is decreased by 24, the result is 28. Find the number.
Let x = the number

$$\text{The number is } \underline{\hspace{2cm}}.$$

3. If 23 is subtracted from twice a number, the result is 35. Find the number.
Let x = the number

$$\text{The number is } \underline{\hspace{2cm}}.$$

4. If 18 more than 5 times a number is 13, find the number.
Let x = the number

$$\text{The number is } \underline{\hspace{2cm}}.$$

5. If a number is added to twice itself, the result is 36. Find the number.
Let x = the number

$$\text{The number is } \underline{\hspace{2cm}}.$$

6. If twice a number is increased by 34, the result is 20. Find the number.
Let x = the number

$$\text{The number is } \underline{\hspace{2cm}}.$$