

# Expressions, and Formulas

Name

Key      CC6

The formula that is used to convert Fahrenheit (F) to Celsius (C) is  $5 \cdot (F - 32) \div 9$ . Convert  $77^\circ\text{F}$  to degrees in Celsius.

$$25^\circ\text{C}$$

Find the total area of a rectangle tile using the formula  $lw$  with the length is  $6\text{in}$  and a  $w$  is  $8\text{in}$ .

$$48\text{in}^2$$

Ms. Li want to make a rectangular garden. The length of the garden is  $8\text{ft}$  and width of the garden is  $7\text{ft}$ . Use the formula  $2l + 2w$  to find the perimeter of the garden.

$$2(8) + 2(7)$$

$$30\text{ft}$$

Charles is 3 years older than Paul. If  $y$  represents Paul's age, what expression represents Charles's age? If Paul is 25 years old, how old is Charles?

$$y + 3$$

$$25 + 3 = 28 \text{ yrs old}$$

Maya bought some pizzas for  $\$14$  each. If  $p$  represents the number of pizzas she bought, what expression shows the total amount she spent? If she bought 5 pizzas how much money did she spend.

$$14p$$

$$14(5) = \$70$$

Mohamed bought several bottles of juice for  $\$3$  each. He paid for all of them with a  $\$20$  bill. If  $j$  represents the number of bottles Mohamed bought, what expression represents the change he would receive? If Mohamed bought 4 bottles of juice, how much change would he receive?

$$20 - 3j$$

$$20 - 3(4) = \$8$$

A giant bamboo plant grew 18 inches per year. When Mrs. Sanchez started measuring the plant it was 5 inches tall. If  $y$  represents the number of years she measured the plant, what expression represents its height?

$$18y + 5$$

Mary earns an allowance of  $\$5$  per week. She also earns  $\$6$  per hour baby-sitting. Write an expression that would represent the total amount of money she earns in one week. If Mary babysits for 6 hours, how much money will she make?

$$5 + 6h$$

$$5 + 6(6) = \$41$$

One Middle School sold tickets for a school play. The price of an adult ticket was  $\$5$ , and the price of a student ticket was  $\$3$ . Write an expression that represents the total amount of money collected. Suppose 150 adult tickets and 100 student tickets were sold. How much money was collected?

$a = \text{adult ticket}$   
 $s = \text{student ticket}$

$$5a + 3s$$

$$5(150) + 3(100) = \$1050$$

# Variables, Expressions, and Formulas

Name \_\_\_\_\_

1. The formula that is used to convert Fahrenheit (F) to Celsius (C) is  $5 \cdot (F - 32) \div 9$ . Convert  $77^{\circ}\text{F}$  to degrees in Celsius.
2. Find the total area of a rectangle tile using the formula  $lw$  with the length is  $6\text{in}$  and a  $w$  is  $8\text{in}$ .
3. Ms. Li want to make a rectangular garden. The length of the garden is  $8\text{ft}$  and width of the garden is  $7\text{ft}$ . Use the formula  $2l + 2w$  to find the perimeter of the garden.
4. Charles is 3 years older than Paul. If  $y$  represents Paul's age, what expression represents Charles's age? If Paul is 25 years old, how old is Charles?
5. Maya bought some pizzas for \$14 each. If  $p$  represents the number of pizzas she bought, what expression shows the total amount she spent? If she bought 5 pizzas how much money did she spend.
6. Mohamed bought several bottles of juice for \$3 each. He paid for all of them with a \$20 bill. If  $j$  represents the number of bottles Mohamed bought, what expression represents the change he would receive? If Mohamed bought 4 bottles of juice, how much change would he receive?
7. A giant bamboo plant grew 18 inches per year. When Mrs. Sanchez started measuring the plant it was 5 inches tall. If  $y$  represents the number of years she measured the plant, what expression represents its height?
8. Mary earns an allowance of \$5 per week. She also earns \$6 per hour baby-sitting. Write an expression that would represents the total amount of money she earns in one week. If Mary babysits for 6 hours, how much money will she make?
9. One Middle School sold tickets for a school play. The price of an adult ticket was \$5, and the price of a student ticket was \$3. Write an expression that represents the total amount of money collected. Suppose 150 adult tickets and 100 student tickets were sold. How much money was collected?