

## EXAMPLE 6 Write a model using standard form

**ONLINE MUSIC** You have \$30 to spend on downloading songs for your digital music player. Company A charges \$.79 per song, and company B charges \$.99 per song. Write an equation that models this situation.

### Solution

Write a verbal model. Then write an equation.

Company A song price (dollars/song)	•	Songs from company A (songs)	+	Company B song price (dollars/song)	•	Songs from company B (songs)	=	Your budget (dollars)
↓		↓		↓		↓		↓
0.79	•	$x$	+	0.99	•	$y$	=	30

▶ An equation for this situation is  $0.79x + 0.99y = 30$ .



### GUIDED PRACTICE for Example 6

10. **WHAT IF?** In Example 6, suppose that company A charges \$.69 per song and company B charges \$.89 per song. Write an equation that models this situation.

## 2.4 EXERCISES

### HOMEWORK KEY

= **WORKED-OUT SOLUTIONS**  
on p. WS1 for Exs. 15, 35, and 53

= **TAKS PRACTICE AND REASONING**  
Exs. 26, 39, 47, 53, 59, and 60

= **MULTIPLE REPRESENTATIONS**  
Ex. 57

### SKILL PRACTICE

- VOCABULARY** Copy and complete: The linear equation  $6x + 8y = 72$  is written in   ?   form.
- WRITING** Given two points on a line, explain how you can use point-slope form to write an equation of the line.

#### EXAMPLE 1

on p. 98  
for Exs. 3–8

**SLOPE-INTERCEPT FORM** Write an equation of the line that has the given slope and y-intercept.

- $m = 0, b = 2$
- $m = 3, b = -4$
- $m = 6, b = 0$
- $m = \frac{2}{3}, b = 4$
- $m = -\frac{5}{4}, b = 7$
- $m = -5, b = -1$

#### EXAMPLE 2

on p. 99  
for Exs. 9–19

**POINT-SLOPE FORM** Write an equation of the line that passes through the given point and has the given slope.

- $(0, -2), m = 4$
- $(3, -1), m = -3$
- $(-4, 3), m = 2$
- $(-5, -6), m = 0$
- $(8, 13), m = -9$
- $(12, 0), m = \frac{3}{4}$
- $(7, -3), m = -\frac{4}{7}$
- $(-4, 2), m = \frac{3}{2}$
- $(9, -5), m = -\frac{1}{3}$