

## YOUR TURN

**6.** When Ryan is 10, his brother Kyle is 15. When Ryan is 16, Kyle will be 21. When Ryan is 21, Kyle will be 26. Write and solve an equation to find Kyle's age when Ryan is 52. Tell what the variables represent.

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**Guided Practice** 

HWH 48 1-6,10,11

Write an equation to express y in terms of x. (Explore Activity, Example 1)

- 1. 10 20 40 X 30 6 16 26 36
- 2. 2 1 3 0 8 12
- 3. 4 10 9 7 11 13
- 12 24 36 48 2 6 4 8
- 5. Jameson downloaded one digital song for \$1.35, two digital songs for \$2.70, and 5 digital songs for \$6.75. Write and solve an equation to find the cost to download 25 digital songs. (Example 2)

Songs downloaded	1	2	5	10
Total cost (\$)	1.35			

Number of songs = n; Cost = c; equation:

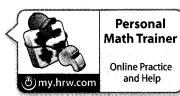
The total cost of 25 songs is \_\_\_\_\_

## **ESSENTIAL QUESTION CHECK-IN**

**6.** Explain how to use a table to write an equation that represents the relationship in the table.

## 12.3 Independent Practice





**7. Vocabulary** What does it mean for an equation to express *y* in terms of *x*?

**8.** The length of a rectangle is 2 inches more than twice its width.

Write an equation relating the length I of the rectangle to its width w.

**9.** Look for a Pattern Compare the *y*-values in the table to the corresponding *x*-values. What pattern do you see? How is this pattern used to write an equation that represents the relationship between the *x*- and *y*-values?

x	20	24	28	32
у	5	6	7	8

**10. Explain the Error** A student modeled the relationship in the table with the equation x = 4y. Explain the student's error. Write an equation that correctly models the relationship.

X	2	4	6	8
y	8	16	24	32

- **11. Multistep** Marvin earns \$8.25 per hour at his summer job. He wants to buy a video game system that costs \$206.25.
  - **a.** Write an equation to model the relationship between number of hours worked *h* and amount earned *e*.
  - **b.** Solve your equation to find the number of hours Marvin needs to work in order to afford the video game system.