Name _____

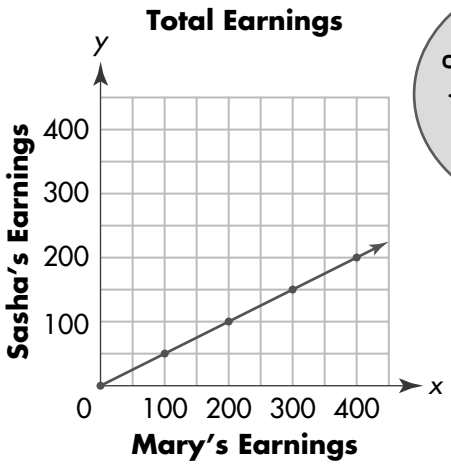
Practice Video Tools Games

Additional Practice 15-3
Analyze and Graph Relationships

Another Look!

Mary and Sasha kept track of the money they earned at their jobs each week. They used the rules "add 100" and "add 50" to complete the table. Then they graphed ordered pairs of the total amounts they have earned after each week.

Total Amount Earned ($)		
Week	Mary	Sasha
1	100	50
2	200	100
3	300	150
4	400	200



Mary earned $400 after 4 weeks.
Sasha earned $200 after 4 weeks.
Mary earned twice as much as Sasha.

In **1–4**, use the rules "add 6" and "add 12" to help you.

1. Every hour at his bakery, Dennis makes 6 everything bagels and 12 blueberry bagels. Complete the table to show how many of each bagel he makes in all after each hour.

Total Bagels Made		
Hour	Everything	Blueberry
1	6	12
2	12	24
3	18	36
4	24	48

2. What ordered pair would represent the total number of each type of bagel Dennis makes in 8 hours?
(48, 96)

3. What relationship do you notice between the total number of everything bagels and the total number of blueberry bagels made after each hour?
Sample answer: There are always half as many everything bagels made as blueberry bagels.

4. Graph the ordered pairs of the total number of each type of bagel made after each hour. **Check students' graphs.**

In **5–7**, use the rules "add 5" and "add 15" to help you.

5. Thurston and Kim kept track of how many songs they downloaded each week for a month. Thurston downloaded 5 songs each week. Kim downloaded 15 songs each week. Complete the table to show the total number of songs each has downloaded after each week.

Total Number of Songs Downloaded		
Week	Thurston	Kim
1	5	15
2	10	30
3	15	45
4	20	60

6. Thurston and Kim continue downloading songs in this manner for 8 weeks. What ordered pair would represent the total number of songs they have each downloaded?

(40, 120)

7. Graph the ordered pairs of the total number of songs each has downloaded after each week.

Check students' graphs.

8. **Model with Math** Diego makes a rectangular prism that is 2 cubes long, 2 cubes wide, and 2 cubes tall. Each dimension of June's rectangular prism is twice as many cubes as Diego's prism. What is the volume of June's prism? Use an equation to show your work.

64 cubic units; $V = 4 \times 4 \times 4$; $V = 64$

9. **Higher Order Thinking** There are 347 students going on a field trip. Each bus holds 44 students. If the school pays \$95 per bus, will they need to spend more than \$1,000 for the buses? How can you decide without using division?

No; Sample answer: Fewer than 10 buses are needed because $44 \times 10 = 440$, and $347 < 440$. Ten buses cost $\$95 \times 10 = \$950$, and $\$950 < \$1{,}000$.

Assessment Practice

10. Claire makes bracelets using blue and red beads. Each bracelet has 20 red beads and 5 blue beads. Write an ordered pair to represent the number of red beads and blue beads Claire will use to make 8 bracelets.

(160, 40)

11. What relationship do you notice between the number of red beads and blue beads Claire uses to make all the bracelets?

Sample answer: Claire uses 4 times as many red beads as blue beads.