Lesson 5 Reteach

Graph Proportional Relationships

> A way to determine whether two quantities are proportional is to graph them on a coordinate plane. If the graph is a straight line through the origin, then the two quantities are proportional.
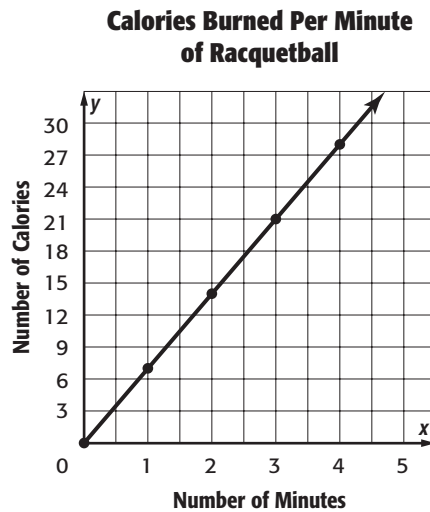
Example 1

A racquetball player burns 7 Calories a minute. Determine whether the number of Calories burned is proportional to the number of minutes played by graphing on the coordinate plane.

Step 1 Make a table to find the number of Calories burned for 0, 1, 2, 3, and 4 minutes of playing racquetball.

Time (min)	0	1	2	3	4
Calories Burned	0	7	14	21	28

Step 2 Graph the ordered pairs on the coordinate plane. Then connect the ordered pairs.

Calories Burned Per Minute of Racquetball

The line passes through the origin and is a straight line. So, the number of Calories burned is proportional to the number of minutes of racquetball played.

Exercise

1. Shontell spends $7 a month plus $0.10 per minute. Determine whether the cost per month is proportional to the number of minutes by graphing on the coordinate plane.
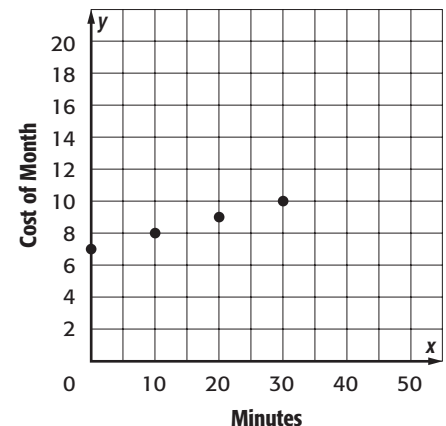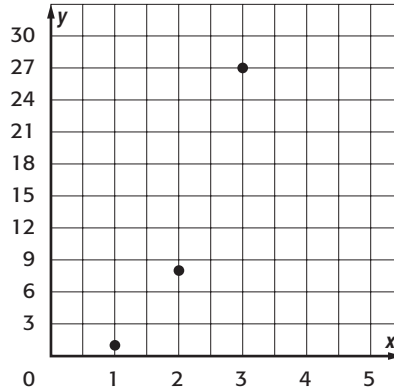
Lesson 5 Skills Practice

Graph Proportional Relationships

Determine whether the relationship between the two quantities shown in each table are proportional by graphing on the coordinate plane.

1.

Volume of a Cube	
Side Length (ft)	Volume (ft³)
1	1
2	8
3	27

nonproportional

2.

DVD Rental	
Number of DVDs	Cost ($)
1	7
2	9
3	11

nonproportional
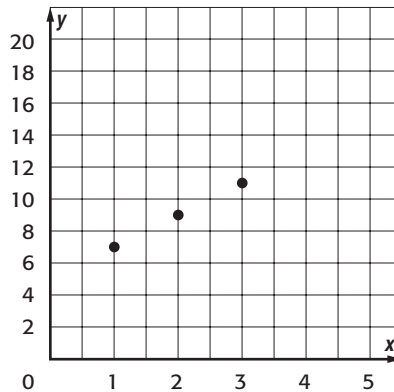
3.

Gallons of Gas Used Per Hour	
Number of Hours	Gallons of Gas
3	15
4	20
5	25

proportional