

TEKS a.6, A.6.G,  
A.7.B



**Another Way to Solve Example 4, page 255**

**MULTIPLE REPRESENTATIONS** In Example 4 on page 255, you saw how to solve the problem about how much salt to add to a saltwater fish tank by writing and using a direct variation equation. You can also solve the problem using a graph or a proportion.

**PROBLEM**

**SALTWATER AQUARIUM** The number  $s$  of tablespoons of sea salt needed in a saltwater fish tank varies directly with the number  $w$  of gallons of water in the tank. A pet shop owner recommends adding 100 tablespoons of sea salt to a 20 gallon tank. How many tablespoons of salt should be added to a 30 gallon saltwater fish tank?

**METHOD 1**

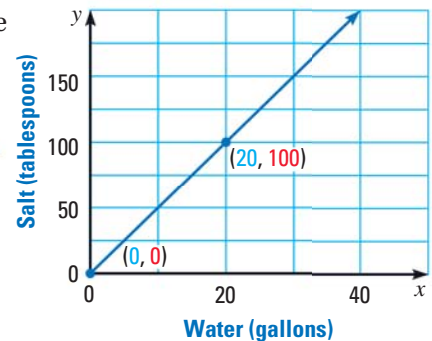
**Using a Graph** An alternative approach is to use a graph.

**STEP 1** Read the problem. It tells you an amount of salt for a certain size fish tank. You can also assume that if a fishtank has no water, then no salt needs to be added. Write ordered pairs for this information.

Number of gallons	Tablespoons of salt
(20, 100)	
(0, 0)	

**STEP 2** Graph the ordered pairs. Draw a line through the points.

The coordinates of points on the line give the amounts of salt that should be added to fish tanks of various sizes.



**STEP 3** Find the point on the graph that has an  $x$ -coordinate of 30. The  $y$ -coordinate of this point is 150, so 150 tablespoons of salt should be added to a 30 gallon tank.

