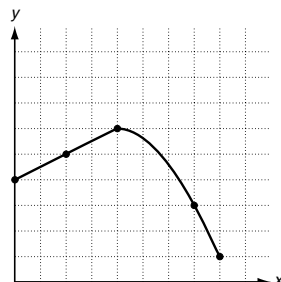
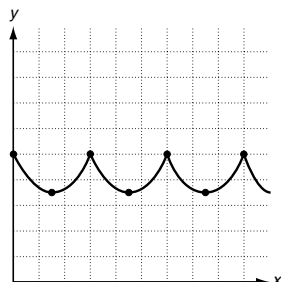
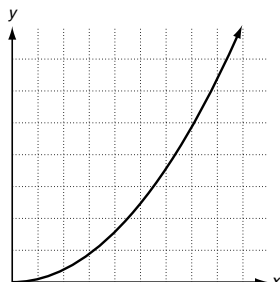
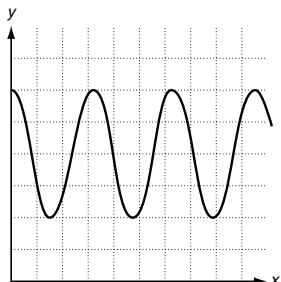


LESSON **9-1** **Practice C**
Multiple Representations of Functions

Match each situation to its corresponding graph. Sketch a possible graph of the situation if it does not match any of the given graphs.

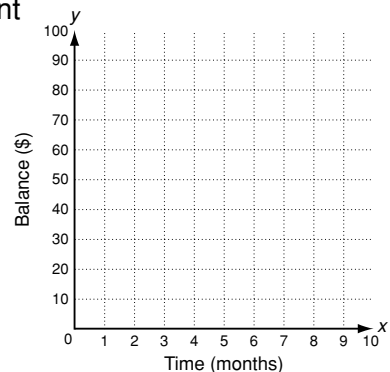


1. A pendulum swings back and forth. _____
2. A new subdivision is built near an elementary school and families with children begin moving in. _____
3. Joan throws a paper airplane into the air. _____
4. Sandy is riding the roller coaster at the amusement park. _____

Solve.

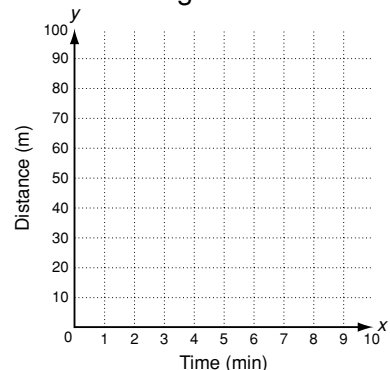
5. The table shows the balance, b , in dollars in a savings account at the end of each month. Create a graph and an equation to represent the balance after m months.

m	1	2	3	4	5	6
b	38	46	54	62	70	78



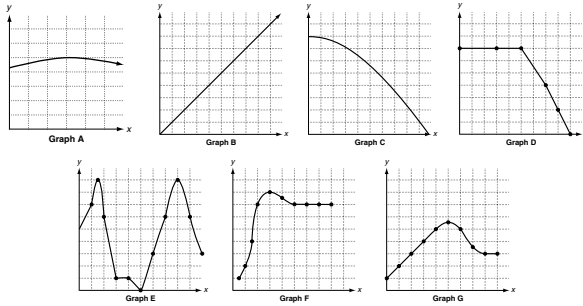
6. A fireworks projectile is launched at 20 meters per second from a 60-meter bridge. The table shows the distance, d , in meters the projectile is above the river after t seconds. Create a graph and an equation to determine how long after the launch the projectile reaches the ground.

t	0	1	2	3	4	5
d	60	75	80	75	60	35



LESSON 9-1 Practice A
Multiple Representations of Functions

Match each situation to its corresponding graph.



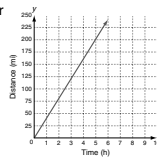
- A bowling ball rolls down the alley and drops into a trough behind the pins. Which graph shows a horizontal line that suddenly drops? **D**
- As a flower vase is filled with water, the level of the water rises. **B**
- A football is kicked and then caught by a person who runs down the football field with it. **G**
- The sales of wide-screen televisions increase rapidly, peak, and then level off. **F**
- Ice cream sales were steady all day at the music festival. **A**
- A restaurant opens late in the morning, experiences a lunchtime rush, and then empties right before the dinner rush. **E**
- The noise level of traffic decreases after the evening rush hour. **C**

Solve.

- A train begins a trip of 240 miles. The train averages 40 miles per hour including stops. Create a table, a graph, and an equation to represent the distance the train travels in relation to time.

Time (h)	0	1	2	3
Distance (mi)	0	40	80	120

$$d = 40t$$



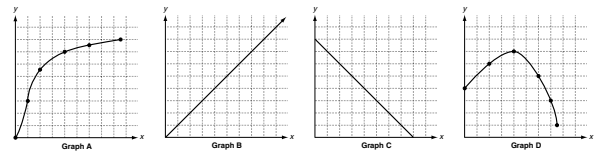
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LESSON 9-1 Practice B
Multiple Representations of Functions

Match each situation to its corresponding graph. Sketch a possible graph of the situation if it does not match any of the given graphs.



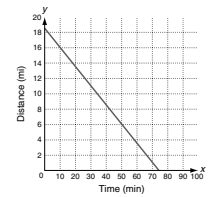
- A train is approaching its destination. **C**
- The temperature on an autumn day increases until late afternoon and then drops dramatically by late evening. **D**
- A helium balloon is released by a running child on a calm day. **B**
- A golf ball hit by a golfer flies over the trees and disappears into the woods. **A**

Solve.

- A bicyclist leaves a rest stop at 1:00 and heads directly for home at a constant rate. The table shows how far, d , he is from home in miles as a function of time, t . Create a graph and an equation to predict the time he will arrive home.

t	1:00	1:10	1:20	1:30	1:40
d	18.5	16.0	13.5	11.0	8.5

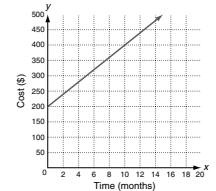
$$d = -0.25t + 17.5$$



- New members at a fitness club pay \$200 to start and then \$20 per month for life. Create a table, a graph, and an equation that represent the total cost of enrollment, c , as a function of months, m , of participation.

m	1	2	3
c	220	240	260

$$c = 20m + 200$$



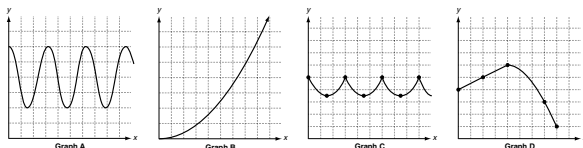
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LESSON 9-1 Practice C
Multiple Representations of Functions

Match each situation to its corresponding graph. Sketch a possible graph of the situation if it does not match any of the given graphs.



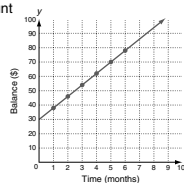
- A pendulum swings back and forth. **C**
- A new subdivision is built near an elementary school and families with children begin moving in. **B**
- Joan throws a paper airplane into the air. **D**
- Sandy is riding the roller coaster at the amusement park. **A**

Solve.

- The table shows the balance, b , in dollars in a savings account at the end of each month. Create a graph and an equation to represent the balance after m months.

m	1	2	3	4	5	6
b	38	46	54	62	70	78

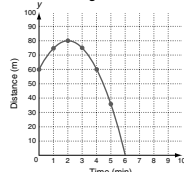
$$b = 8m + 30$$



- A fireworks projectile is launched at 20 meters per second from a 60-meter bridge. The table shows the distance, d , in meters the projectile is above the river after t seconds. Create a graph and an equation to determine how long after the launch the projectile reaches the ground.

t	0	1	2	3	4	5
d	60	75	80	75	60	35

$$d = -5t^2 + 20t + 60$$



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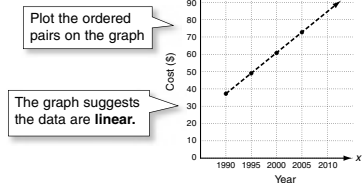
Holt Algebra 2

LESSON 9-1 Reteach
Multiple Representations of Functions

You can use a representation of a function to create a different representation of the same function.

The table shows the cost of renting mountain bikes for 5 days at Outdoor Biker from 1990 through 2005. Use the table to create a graph and an equation.

Year	Cost (\$)
1990	37
1995	49
2000	61
2005	73



Write a linear equation.

Step 1 Define the variables. Let x = year and y = the rental cost.

Step 2 Find the slope. Choose two points: (1990, 37) and (1995, 49).

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{49 - 37}{1995 - 1990} = \frac{12}{5} = 2.4 \quad (x_1, y_1) \quad (x_2, y_2)$$

Step 3 Write the equation of the line using the point-slope form.

$$y - y_1 = m(x - x_1)$$

$$y - 37 = 2.4(x - 1990) \quad \text{Use } m = 2.4 \text{ and } (1990, 37) \text{ for } (x_1, y_1).$$

$$y = 2.4x - 4739$$

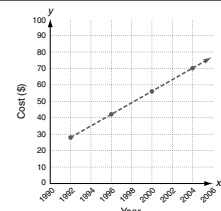
Use the equation to predict the cost of renting a mountain bike in 2007.

$$y = 2.4x - 4739 = 2.4(2007) - 4739 = \$77.80$$

The table shows the cost of renting ocean kayaks for a week at Ocean Adventures. Use the table to solve.

- Use the data to create a graph.

Year	Cost (\$)
1992	28
1996	42
2000	56
2004	70



- Write a linear equation. $y = 3.5x - 6944$

- Predict the cost of renting a kayak in 2006. **\$77**

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