Families of Functions Intro
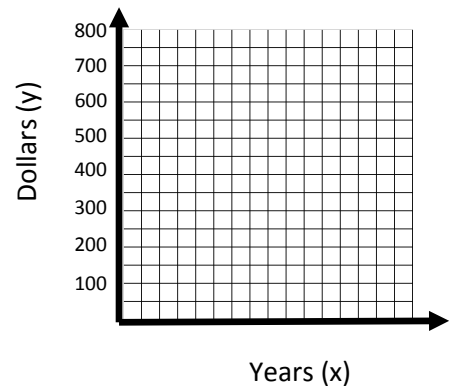
Name:_____

7th Grade Accelerated Math

1. A student invests $100 and it doubles in value every 5 years. Graph the situation to show the amount of money the student would have after…

- 0 years
- 5 years
- 10 years
- 15 years

Using your graph, predict how much money this student would have after 8 years.

(Graph: y-axis labeled Dollars (y), values 100–800; x-axis labeled Years (x))

2. A football is punted with an initial vertical speed of 30 m/s. It slows down until it reaches the top of its path after 3 seconds, and then begins to speed up on its way back down. Because of gravity, the speed changes by 10 m/s every second. Find the speed of the football after…

- 0 seconds
- 1 second
- 2 seconds
- 3 seconds (top of path)
- 4 seconds
- 5 seconds
- 6 seconds

Using your graph, predict the speed of the football after 2.5 seconds

(Graph: y-axis labeled Speed (m/s) y, values 10–60; x-axis labeled Seconds (x), values 1–6)
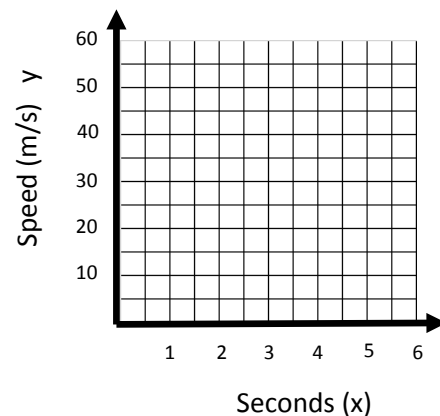
3. It takes 4 people 10 hours to paint the Junior High School. Graph the situation to show the amount of time it would take to complete the job if…

- 1 person was painting
- 2 people were painting
- 4 people were painting
- 8 people were painting

Using your graph, predict how long it would take to complete the job if 5 people were working.

(Graph: y-axis labeled Hours (y), values 10–40; x-axis labeled People (x))
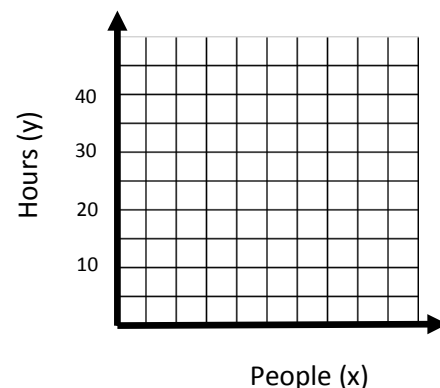
4. A student has $25 and saves an additional $5 each day. Graph the situation to show the amount of money the student would have after…

- 0 additional days
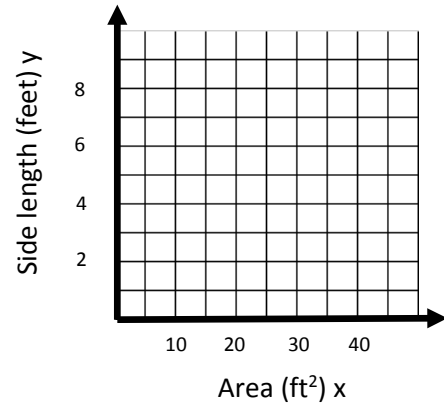- 2 additional days
- 5 additional days
- 9 additional days

Using your graph, predict how many days it would take to earn $45.

Dollars (y)

80

60

40

20

Days (x)
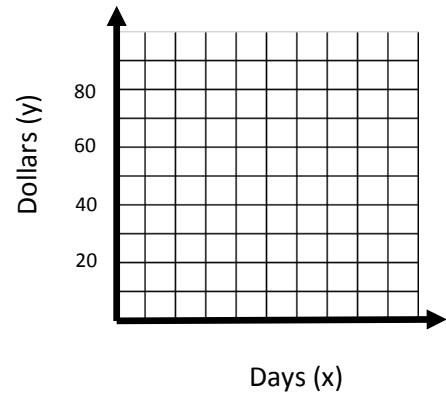
5. Find the side length of a square with the following areas…

- 0 ft²
- 4 ft²
- 16 ft²
- 36 ft²
- 49 ft²

Using your graph, predict the side length of a square with an area of 20 ft².

Side length (feet) y

8

6

4

2

10   20   30   40

Area (ft²) x

6. Find the area (length x width) of a rectangle with a perimeter of 100 feet, and a width of…

- 2 feet
- 10 feet
- 20 feet
- 25 feet
- 30 feet
- 40 feet
- 48 feet

Area (feet²) y

600

500

400

300

200

100

10 20 30 40 50 60

Width (feet) x

Using your graph, predict the width of a rectangle with an area of 350 ft².