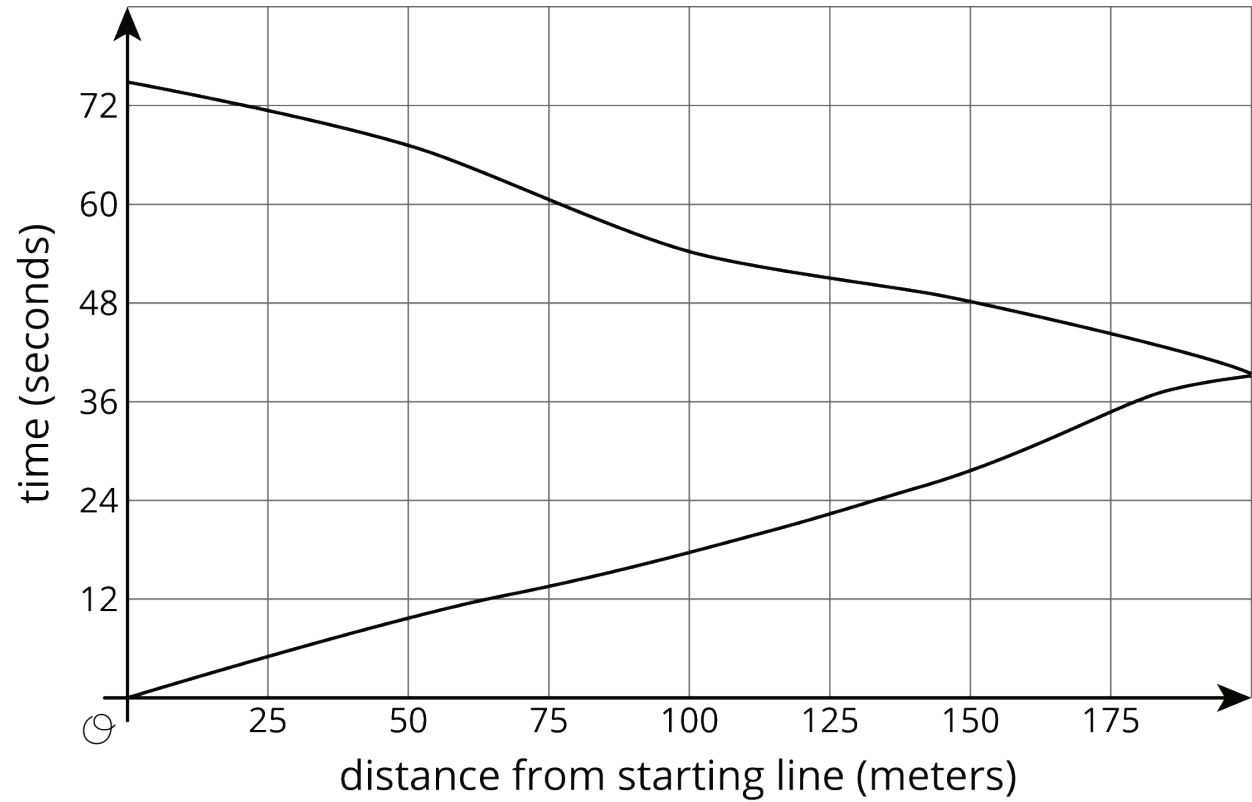


# Unit 6 Lesson 4: Tables, Equations, and Graphs of Functions

## 1 Notice and Wonder: Doubling Back (Warm up)

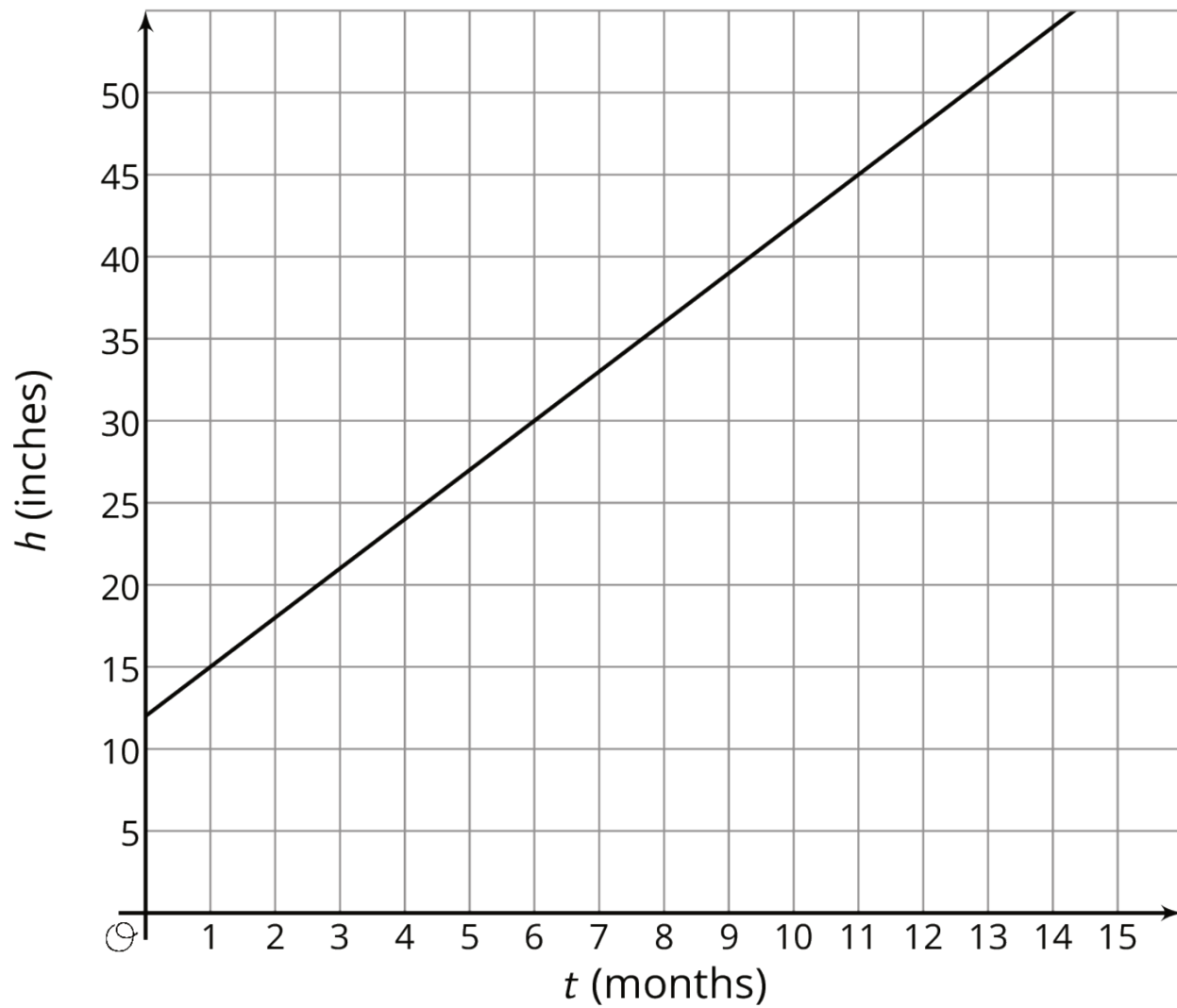
### Student Task Statement

What do you notice? What do you wonder?



## 2 Equations and Graphs of Functions

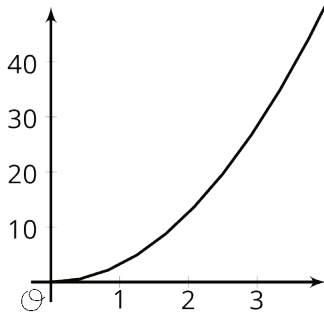
Images for Launch



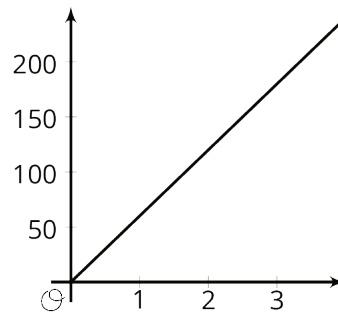
### Student Task Statement

The graphs of three functions are shown.

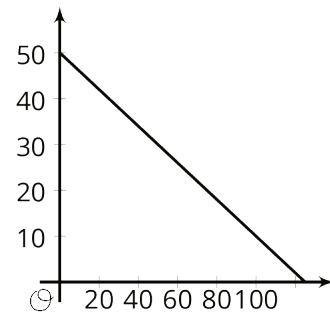
A



B



C



1. Match one of these equations to each of the graphs.

a.  $d = 60t$ , where  $d$  is the distance in miles that you would travel in  $t$  hours if you drove at 60 miles per hour.

b.  $q = 50 - 0.4d$ , where  $q$  is the number of quarters, and  $d$  is the number of dimes, in a pile of coins worth \$12.50.

c.  $A = \pi r^2$ , where  $A$  is the area in square centimeters of a circle with radius  $r$  centimeters.

2. Label each of the axes with the independent and dependent variables and the quantities they represent.

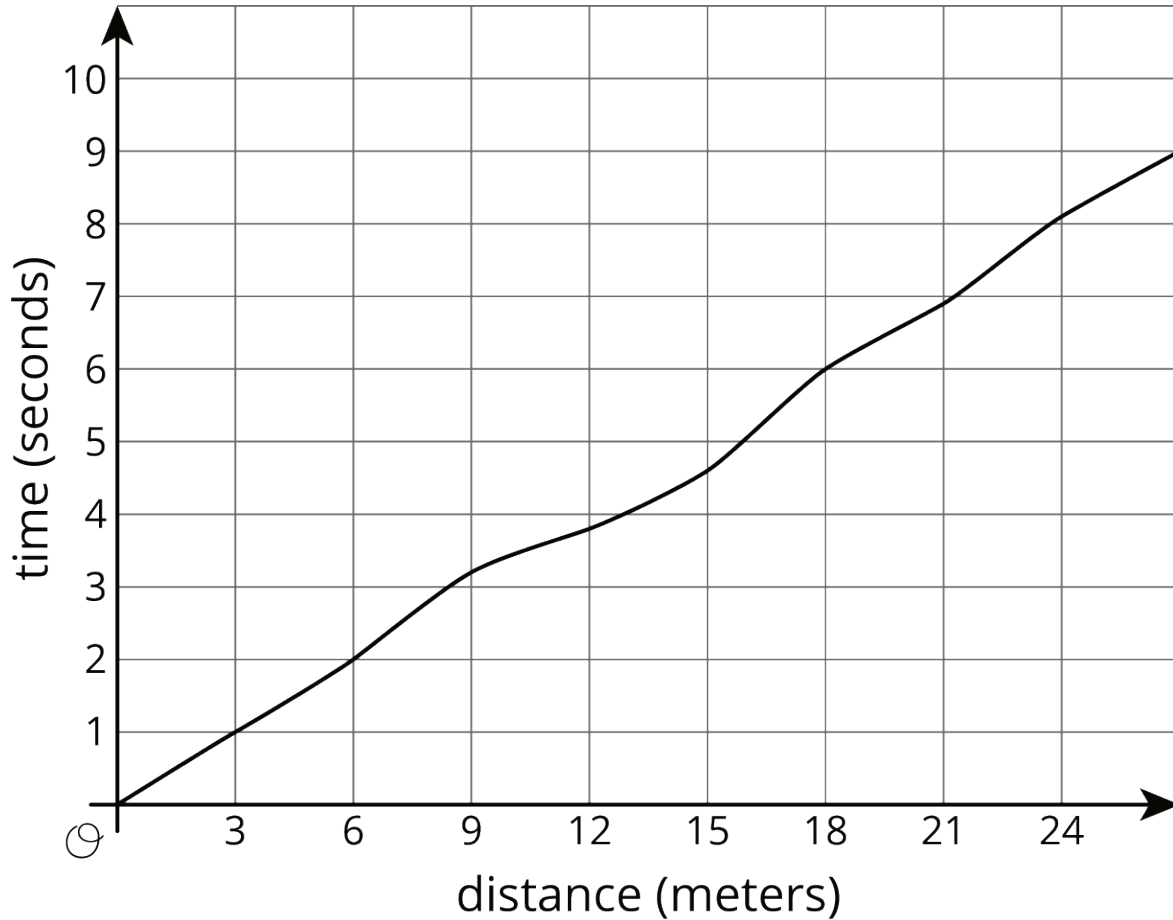
3. For each function: What is the output when the input is 1? What does this tell you about the situation? Label the corresponding point on the graph.

4. Find two more input-output pairs. What do they tell you about the situation? Label the corresponding points on the graph.

### 3 Running around a Track

#### Student Task Statement

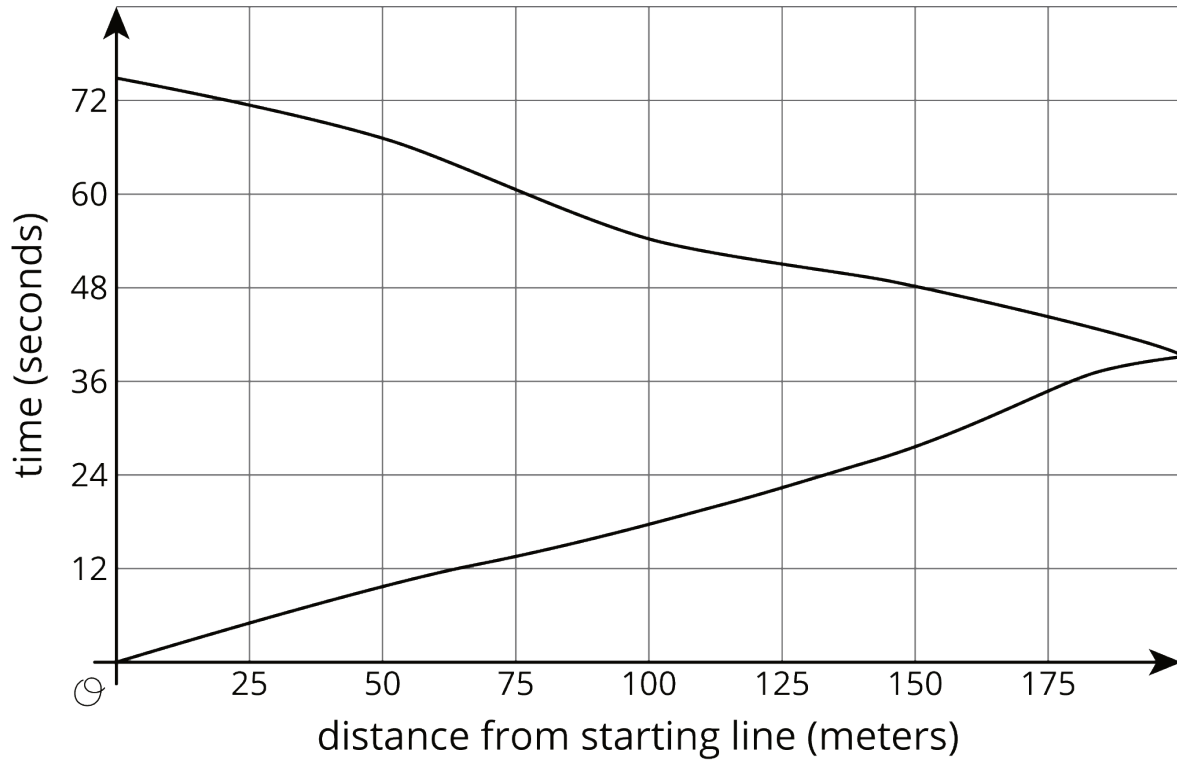
1. Kiran was running around the track. The graph shows the time,  $t$ , he took to run various distances,  $d$ . The table shows his time in seconds after every three meters.



$d$	0	3	6	9	12	15	18	21	24	27
$t$	0	1.0	2.0	3.2	3.8	4.6	6.0	6.9	8.09	9.0

- How long did it take Kiran to run 6 meters?
- How far had he gone after 6 seconds?
- Estimate when he had run 19.5 meters.
- Estimate how far he ran in 4 seconds.
- Is Kiran's time a function of the distance he has run? Explain how you know.

2. Priya is running once around the track. The graph shows her time given how far she is from her starting point.



- What was her farthest distance from her starting point?
- Estimate how long it took her to run around the track.
- Estimate when she was 100 meters from her starting point.
- Estimate how far she was from the starting line after 60 seconds.
- Is Priya's time a function of her distance from her starting point? Explain how you know.