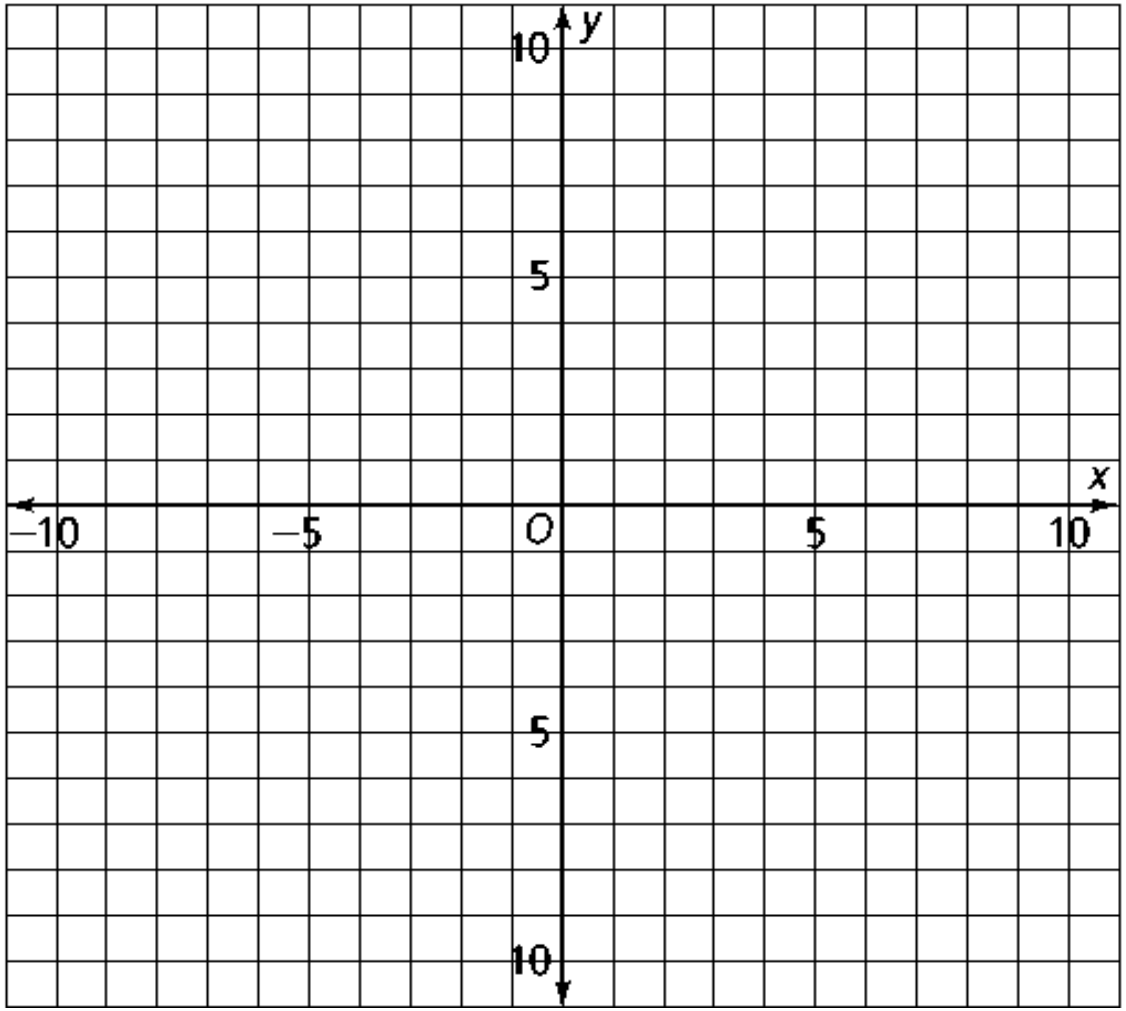
6.5

Analyzing and Sketching Graphs

Do Now

Graph the data and determine the function of the data.

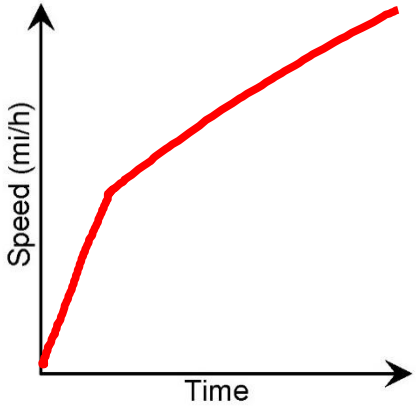
Input, *x*	1	2	3	4
Output, *y*	3	5	7	9



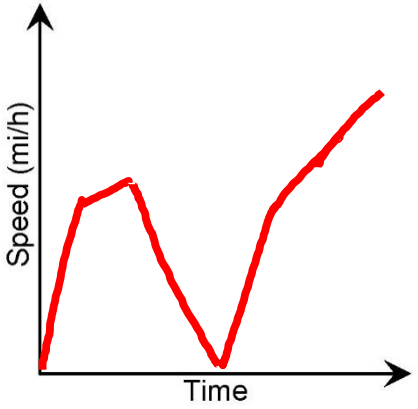
Matching Situations to Graph

The graphs show the speeds of three snowboarders during the Olympics. Match the graph to the situations below.

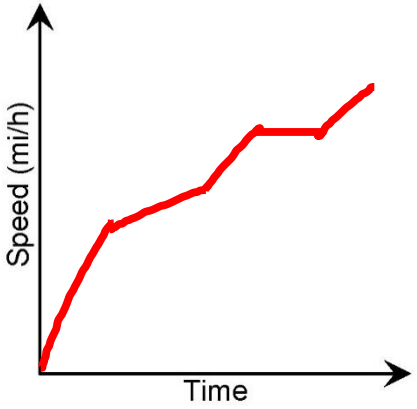
Graph 1



Graph 2



Graph 3



A) **Jordan gets off to a good start and continues through the course, picking up speed.**

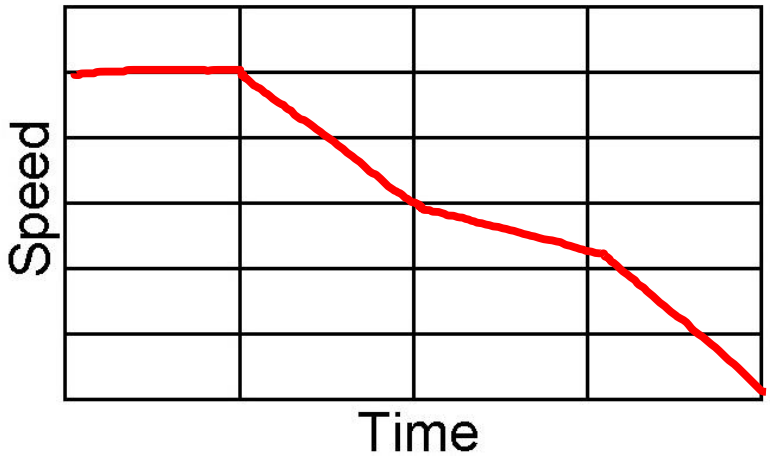
B) **Stacy gets off to a good start and picks up speed. Towards the end of the race, she nearly falls and her speed stops increasing. She rights herself and finishes the race, reaching her greatest speed.**

C) **Xavier gets off to a good start but falls around the middle of the race. He gets up and finishes the race, gaining speed through the finish line.**

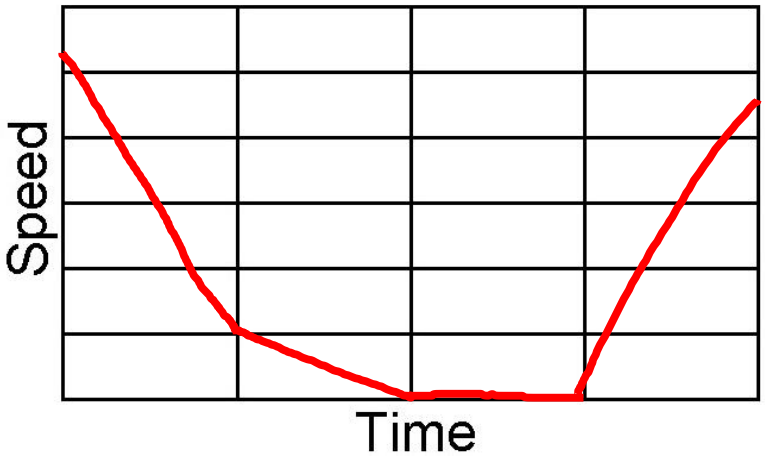
Matching Situations to Graph

The graphs show the speeds of two cars over time. Match the graph to the situations below.

Graph 1



Graph 2

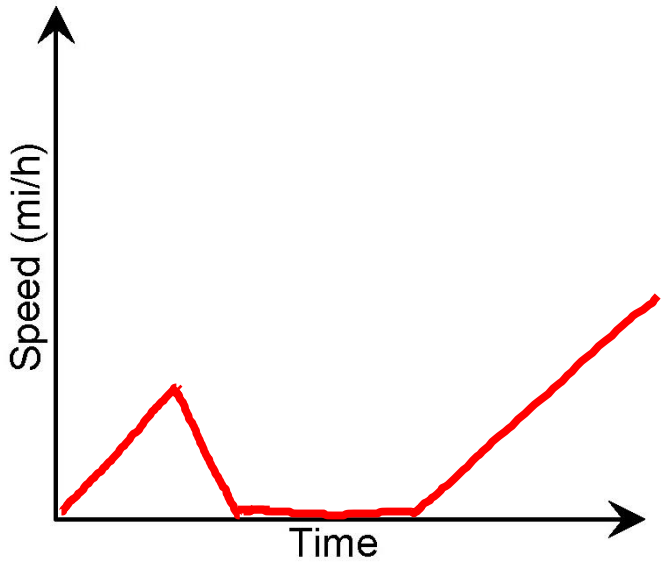


A) **Ms. Nguyen is traveling on the highway. She pulls over, stops, and then accelerates rapidly as she gets on the on the highway.**

B) **Ms. Hutsell slows down as she leaves a main road. She continues to slow down as she turns onto other streets and eventually stops in front of a house.**

Describing a Graph

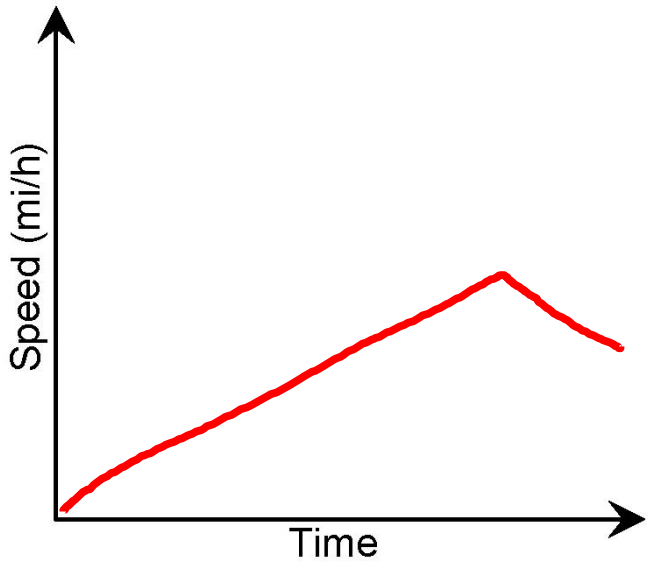
The graph gives the speeds in mi/h of David who is riding a snowmobile.



In your own words, describe David's ride.

Describing a Graph

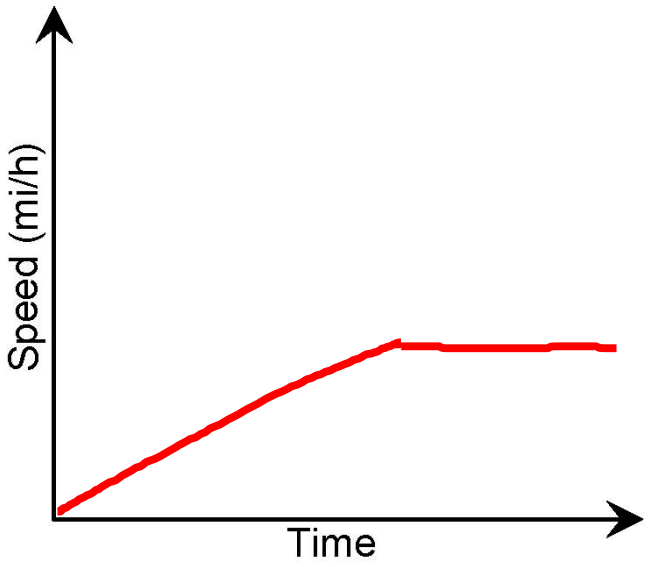
The graph gives the speeds in mi/h of Amber who is riding a snowmobile.



In your own words, describe Amber's ride.

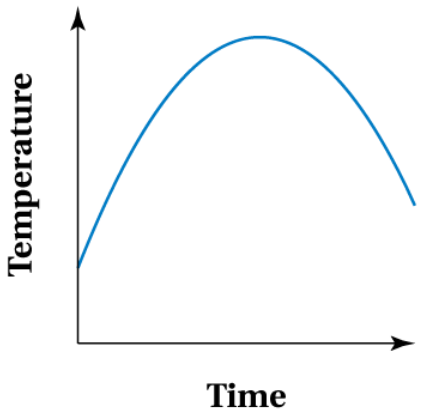
Describing a Graph

The graph gives the speeds in mi/h of Kai who is riding a snowmobile.



In your own words, describe Kai's ride.

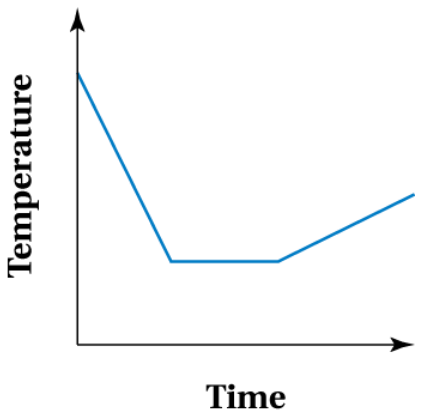
Belfast, Maine



The graphs show the temperatures throughout the day in two cities.

a. Describe the change in temperature in each city.

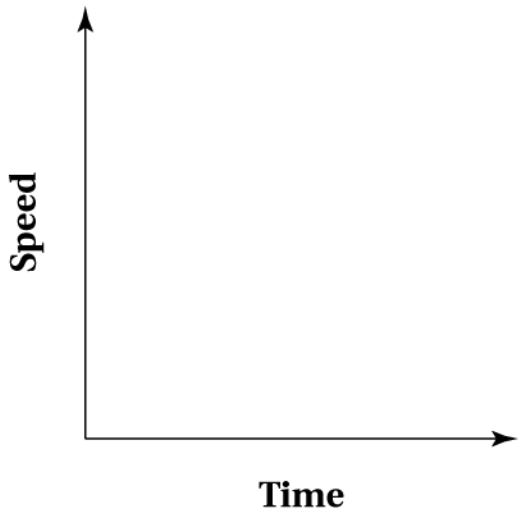
Newport, Oregon



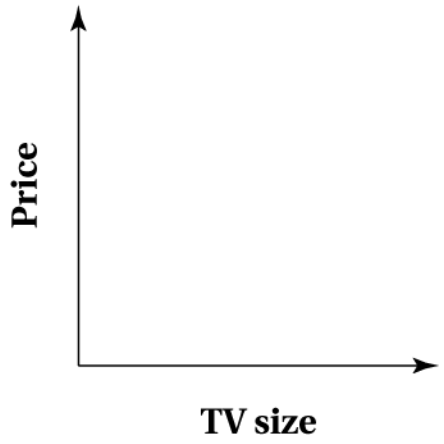
b. Make three comparisons from the graphs.

Sketch a graph that represents each situation.

a. **A stopped subway train gains speed at a constant rate until it reaches its maximum speed. It travels at this speed for a while, and then slows down at a constant rate until coming to a stop at the next station.**



b. As television size increases, the price increases at an increasing rate.



population over time.