Interpreting Graphs
Warm Up

Relating Height and Time at Canada’s Wonderland

At Canada’s Wonderland, visitors can choose from a wide variety of rides. Vikings Rage™ is a large ship that swings higher and higher. At its highest position, people on the ride feel as if they will fall out of their seats.

1. Imagine that you are on Vikings Rage.
   a) Visualize how high above the ground you are as the ride progresses from the beginning to the end.
   b) Which graph below best represents the relationship between your height above the ground and the elapsed time? Explain your choice.
Drop Zone Stunt Tower™ is a 23-storey free-fall ride. People in open cockpit seats are lifted to the top of the ride, where there is a brief stop. Then, they are dropped straight down, reaching speeds of 100 km/h before coming to a complete stop.

2. Imagine you are on Drop Zone Stunt Tower.
   a) Visualize how high above the ground you are as the ride progresses from the beginning to the end.
   b) Which graph below best represents the relationship between your height above the ground and the elapsed time? Explain your choice.

Graph 1

Graph 2

Graph 3
Sketch the following graphs in your notes and match each graph with one of the situations.

a) The height of a baseball thrown up into the air measured over several seconds
b) The height of a child measured over several years
c) The height of a lit candle measured over several hours
What's Different?

1. Which graph below best represents each scenario?
   a) the height of a tree over time
   b) the height of a Ferris wheel seat as the wheel rotates
   c) the number of hours you might sleep each day over your whole lifetime
   d) the number of computers sold, compared to the selling price

   i) Graph 1  (b)  Ferris wheel
   ii) Graph 2  (a)  Tree
   iii) Graph 3  (c)  Sleep
   iv) Graph 4  (d)  Computers
8 groups - each assigned a question

1. A train pulls into a station and lets off its passengers.

   a) Speed
   Time elapsed

   b) Speed
   Time elapsed

   c) Speed
   Time elapsed

   d) Speed
   Time elapsed

Speed reduces steadily to zero
2. A man takes a ride on a ferris wheel.

Has a fixed maximum height and a fixed minimum height (once on the wheel!)
3. A woman climbs a hill at a steady pace and then starts to run down one side.

- **Steady speed** (horizontal line)
- Then speed increases as she runs down the other side of the hill