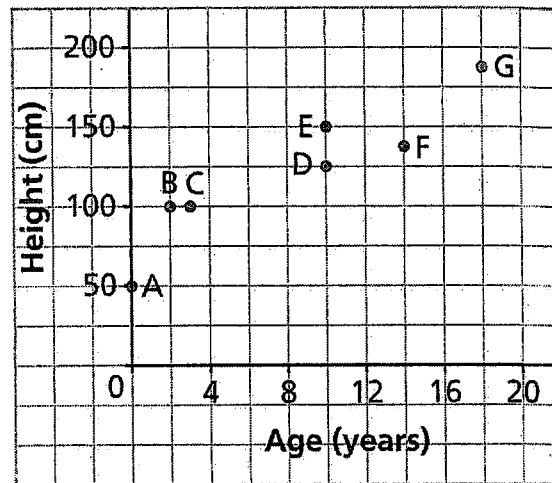


Foundations of Math & Pre-Calculus 10
Lesson 5.3 ~ Interpreting & Sketching Graphs

Example #1: Each point on this graph represents a person. Explain your answer to each question below.

Ages and Heights of People



a) Which person is the oldest? What is his or her age?

person G is 18 years old

b) Which person is the youngest? What is his or her age?

person A is 0 years old

c) Which two people have the same height? What is this height?

people B & C are both 100 cm tall.

d) Which two people have the same age? What is this age?

people D & E are both 10 years old

e) Which of person B or C is taller for his or her age?

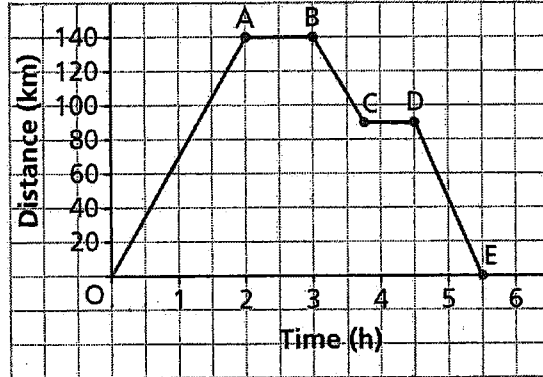
person B is taller for his or her age
since he or she is younger

f) Does this graph represent a function?

No, this graph is not a function since
the input 10 has two outputs, 125 & 150

Example #2: This graph represents a day trip from Athabasca to Kikino in Alberta, a distance of approximately 140 km. Describe the journey for each segment of the graph, and then answer the questions below.

Day Trip from Athabasca to Kikino



Segment	Graph	Journey
OA	goes up to the right; km & h are increasing	it takes 2 h to drive 140 km to Kikino
AB	goes horizontal; h is increasing but km is constant	1 hr is spent in Kikino
BC	goes down to the right; h is increasing but km is decreasing	car drives for 45 min and travels 50 km toward Athabasca
CD	same as AB	45 mins are spent at the stop
DE	same as BC	it takes 1hr to drive the last 90 km to Athabasca

a) What are the dependent and independent variables?

independent: time (h)

dependent: distance (km)

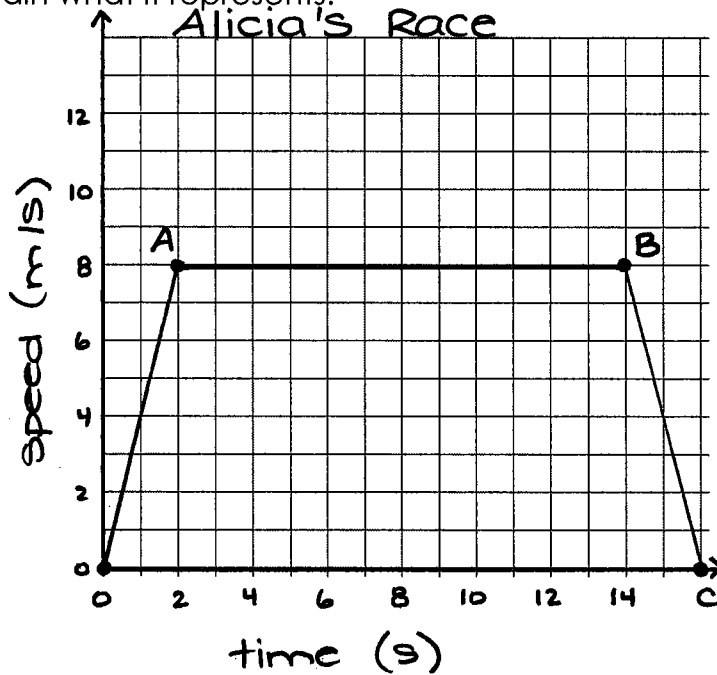
b) What was the total driving time

$$OA + BC + DE$$

$$= 2 + 0.75 + 1$$

$$= \boxed{3.75 \text{ hrs}}$$

Example #3: At the beginning of a race, Alicia took 2 s to reach a speed of 8 m/s. She ran at approximately 8 m/s for 12 s, and then slowed down to a stop in 2 s. Sketch a graph of speed as a function of time. Label each section of your graph and explain what it represents.



OA → speeding up

AB → maintaining speed

BC → slowing down.