

# 6.1 Graphs of Relations: Interpreting & Sketching Graphs

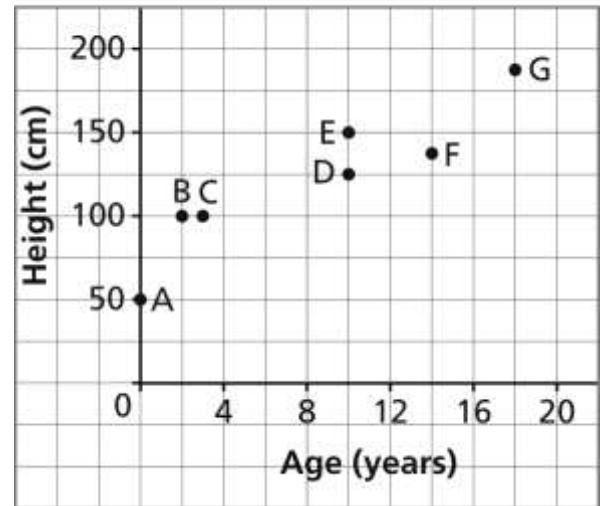
## Vocabulary:

- **Graph:** a diagram representing a \_\_\_\_\_ among two or more things by a number of distinctive dots, lines, bars, etc.
- **Examples:** \_\_\_\_\_.

1. Each point on this graph represents a person. The graph represents a relationship between \_\_\_\_\_

\_\_\_\_\_.

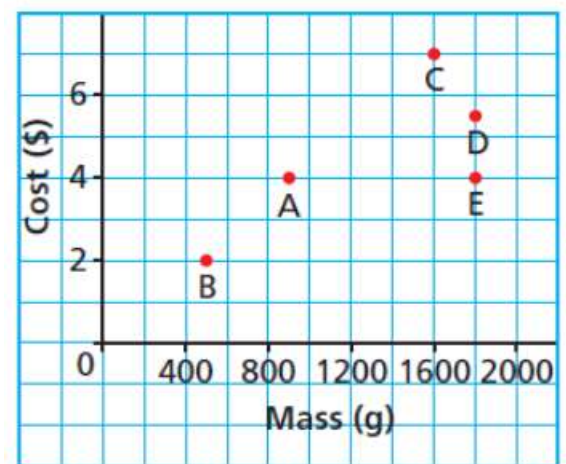
**Ages and Heights of People**



- a) Which person is the oldest? \_\_\_\_\_  
What is her or his age? \_\_\_\_\_
- b) Which person is the youngest? \_\_\_\_\_  
What is her or his age? \_\_\_\_\_
- c) Which two people have the same height? \_\_\_\_\_  
What is this height? \_\_\_\_\_
- d) Which two people have the same age? \_\_\_\_\_  
What is this age? \_\_\_\_\_
- e) Which of person B or C is taller for her or his age? \_\_\_\_\_

2. Each point on this graph represents a bag of popcorn.

**Costs and Masses of Various Bags of Popcorn**

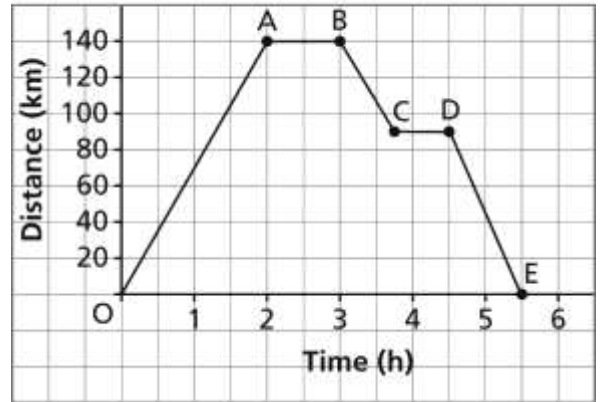


- a) Which bag is most expensive? \_\_\_\_\_  
What does it cost? \_\_\_\_\_
- b) Which bag has the least mass? \_\_\_\_\_  
What is this mass? \_\_\_\_\_
- c) Which bags the same mass? \_\_\_\_\_  
What is this mass? \_\_\_\_\_
- d) Which bags costs the same? \_\_\_\_\_  
What is this cost? \_\_\_\_\_
- e) Which bag has the best value for money? \_\_\_\_\_

3. This graph represents a day trip from Athabasca to Kikino in Alberta, a distance of approximately 140 km. The graph represents a relationship between \_\_\_\_\_

Describe the journey for each segment of the graph.

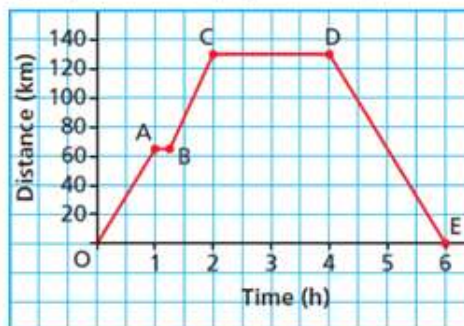
Day Trip from Athabasca to Kikino



| Segment | Journey |
|---------|---------|
| OA      |         |
| AB      |         |
| BC      |         |
| CD      |         |
| DE      |         |

4. This graph represents a day trip from Winnipeg to Winkler in Manitoba, a distance of approximately 130 km. The graph represents a relationship between \_\_\_\_\_  
 \_\_\_\_\_ Describe the journey for each segment of the graph.

Day Trip from Winnipeg to Winkler, Manitoba



The distance between Winnipeg and Winkler is 130 km.

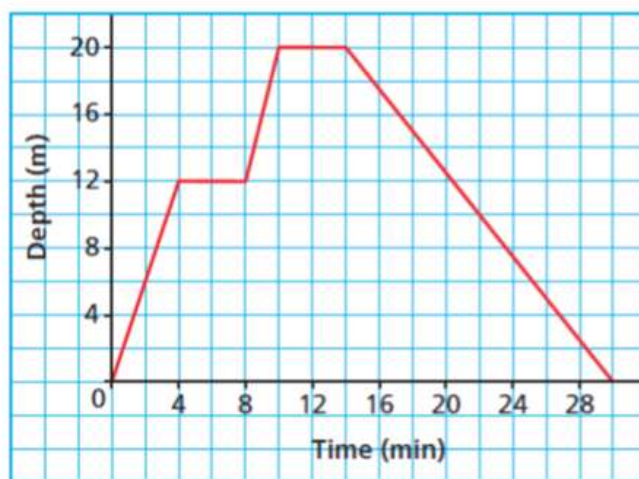
| Segment | Journey |
|---------|---------|
| OA      |         |
| AB      |         |
| BC      |         |
| CD      |         |
| DE      |         |

5. This graph represents a scuba diver's dive. The graph represents a relationship between \_\_\_\_\_  
 \_\_\_\_\_.

Answer the following questions:

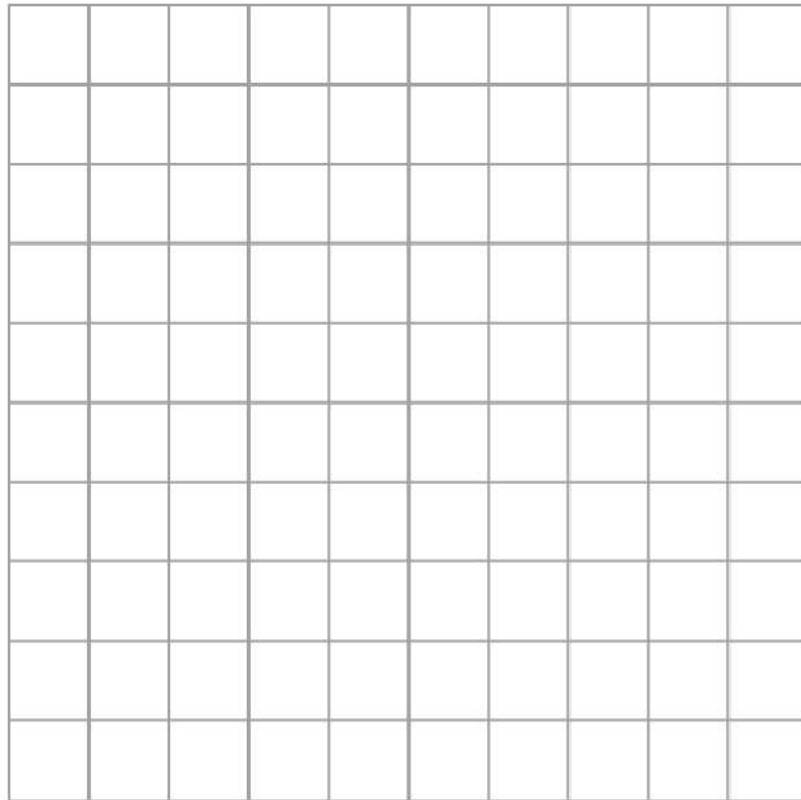
- How many minutes did the dive last? \_\_\_\_\_ minutes
- At what times did she stop her descent? \_\_\_\_\_ min, \_\_\_\_\_ min
- What was the greatest depth the diver reached? \_\_\_\_\_ m
- For how many minutes was the diver at that depth? \_\_\_\_\_ min

A Scuba Diver's Dive



6. 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, 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.



| Segment | Journey |
|---------|---------|
| OA      |         |
| AB      |         |
| BC      |         |

**HW:**

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