Math 1201
5.3 Interpreting and Sketching Graphs

In math a graph provides a visual representation of data. The following graph shows the depth of a scuba diver as a function of time.
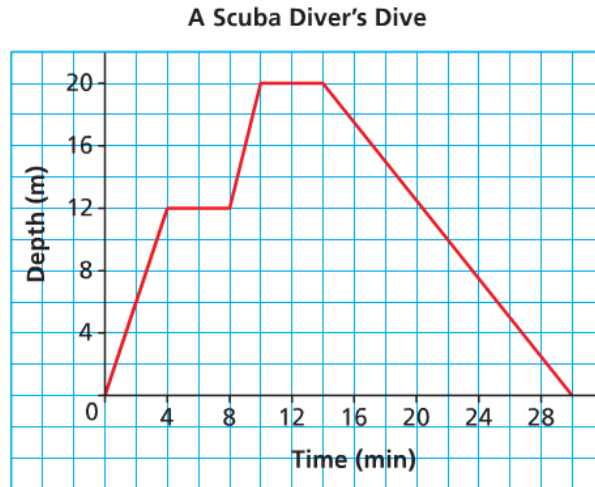
How many minutes did the dive last?

30 minutes

At what times did the diver stop her descent? *from 4min – 8min*
10min – 14 min

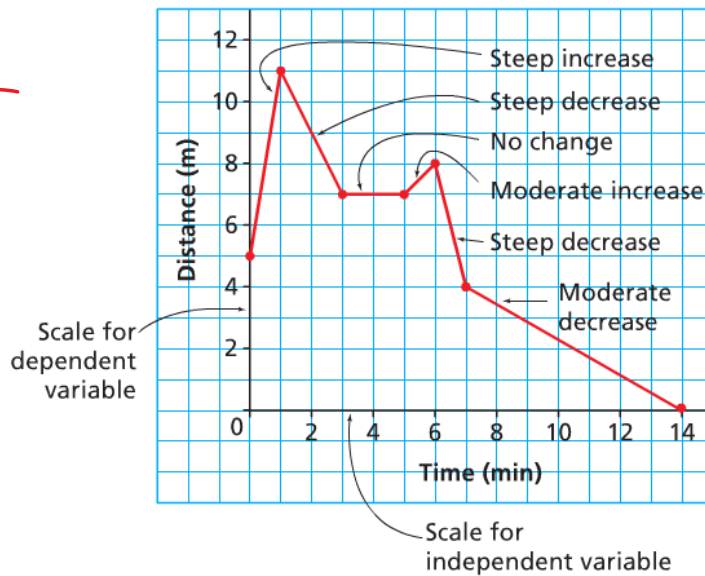What was the greatest depth the diver reached? *20m*

A Scuba Diver's Dive

What a Graph Can Tell You

The properties of a graph can provide information about a given situation:

Range

Domain

Example 1:

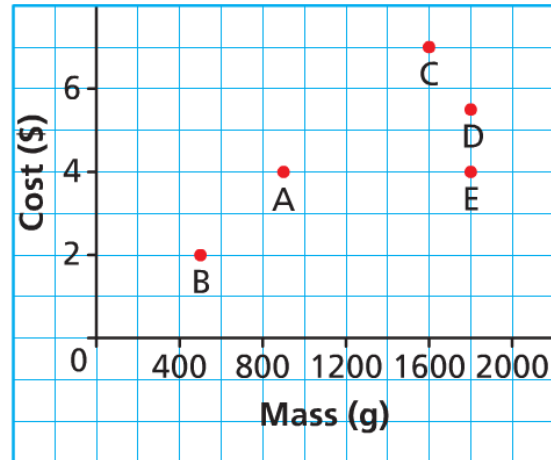Each point on this graph represents a bag of popping corn. Explain the answer to each question below:

(A) Which bag is the most expensive and what does it cost?

C - $7

(B) Which bag has the least mass and what is that mass?

B - 500g

Costs and Masses of Various Bags of Popcorn

(C) Which bags have the same mass and what is that mass?

D & E - 1800g

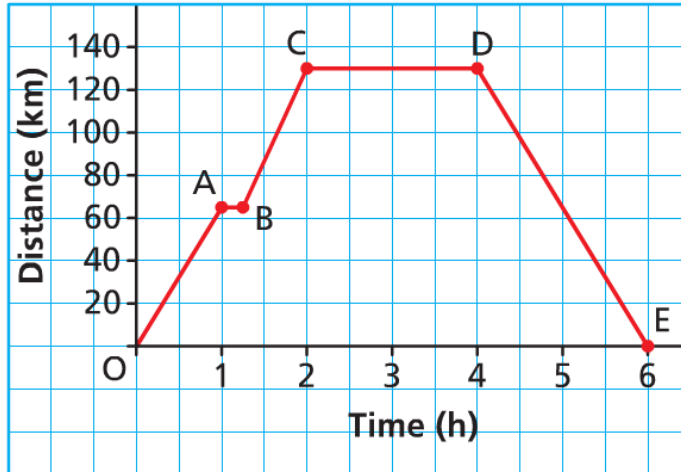(D) Which bags cost the same and what is the cost?

A & E - $4

(E) Which of bags C or D has better value for the money?

D

Example 2:

Describe the journey for each segment of graph:

Day Trip from Corner Brook to Cow Head

Example 3:

Samuel went on a bicycle ride. He accelerated until he reached a speed of 20 km/h, then he cycled for 30 min at approcimately 20 km/h. Samuel arrived at the bottom of a hill, and his speed decreased to approximately 5 km/h for 10 min as he cycled up the hill. He stopped at the top of the hill for 10 min.

Sketch a graph of speed as a function of time. Label each section of the graph, and explain what it represents.

Textbook Questions: page 281 - 282 #3, 4, 6, 7, 8, 9