

WARM-UP...

Given $f(x) = 3x - 5$ & $g(x) = 2x^2 - 3x + 1$ determine each of the following...

$$1) f(4) = 3(4) - 5 = 12 - 5 = 7$$

$$2) f(0) = 3(0) - 5 = -5$$

$$3) f\left(\frac{2}{3}\right) = 3\left(\frac{2}{3}\right) - 5 = 2 - 5 = -3$$

$$4) g(-3)$$

$$2(-3)^2 - 3(-3) + 1$$

$$2(9) + 9 + 1$$

$$18 + 10 = 28$$

$$5) g(3.5) = 2(3.5)^2 - 3(3.5) + 1 = 15$$

$$6) g(f(-1))$$

$$7) \text{Find } x \text{ when } f(x) = 1$$

$$8) \text{Find } x \text{ when } f(x) = 7$$

$$7 = 3x - 5$$

$$\frac{12}{3} = \frac{3x}{3}$$

$$4 = x$$

$$3(-1) - 5 = -3 - 5 = -8$$

$$g(-8) = 2(-8)^2 - 3(-8) + 1$$

$$= 2(64) + 24 + 1$$

$$= 128 + 25$$

$$= 153$$

$$1 = 3x - 5$$

$$\frac{6}{3} = \frac{3x}{3}$$

$$x = 2$$

$$19b) \quad C(F) = \frac{5}{9}(F - 32)$$

$$C(F) = 20$$

$$20^{\circ}C = 68^{\circ}F$$

$$C(32) = 0$$

$$20 = \frac{5}{9}(F - 32)$$

$$\frac{180}{5} = \frac{5(F - 32)}{5}$$

$$36 = F - 32$$

$$68 = F$$

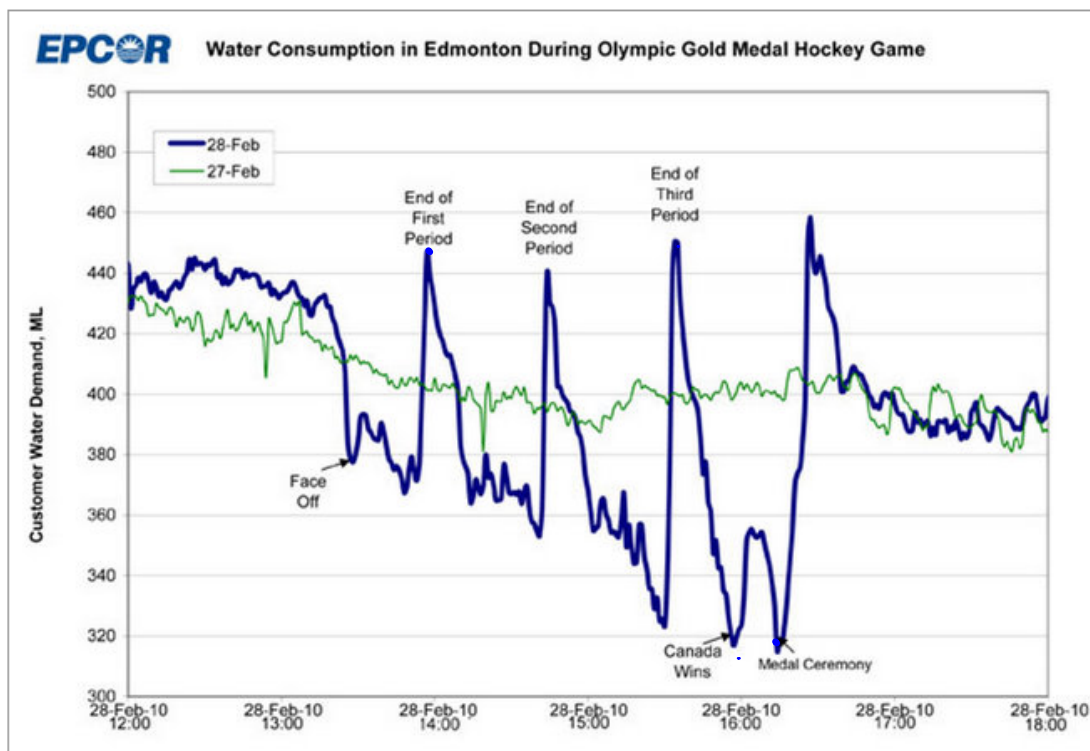
$$\underset{\uparrow}{C}(\cancel{i}) = 2.54 \underset{\uparrow}{i}$$

$$C = 2.54i$$

$$y = 2x + 4$$
$$\underset{\sim}{y}(x) = 2x + 4$$

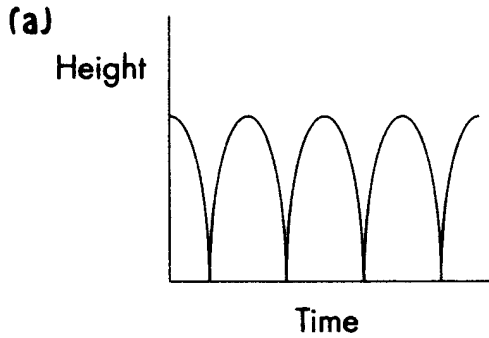
What If Everybody in Canada Flushed At Once?

Written by Pats Papers | Monday, 8 March 2010 2:42 PM

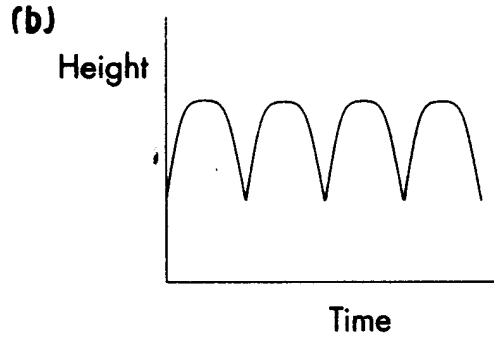


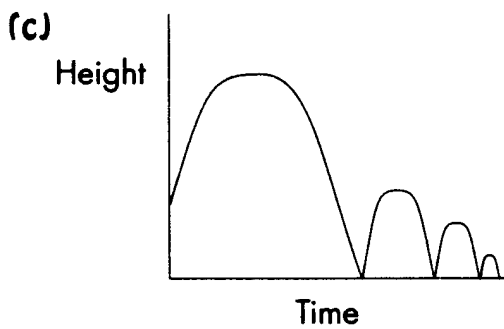
EXAMPLE: Interpreting graphs... The Height of the Matter

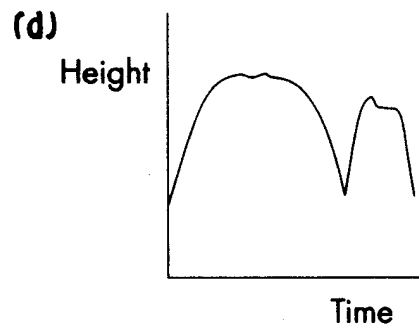
1. Hiro and Francine were playing basketball in their school gym. Describe, in words, what is happening to the basketball for each height-time graph. The first one is done for you.



Hiro is bouncing the ball on the floor.









5.3 Interpreting and Sketching Graphs

LESSON FOCUS

Describe a possible situation for a given graph and sketch a possible graph for a given situation.

Make Connections

In math, a graph provides much information. This graph shows the depth of a scuba diver as a function of time.

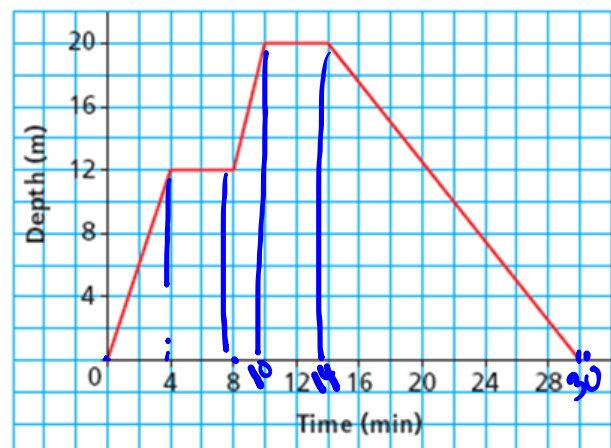
How many minutes did the dive last?

At what times did the diver stop her descent?

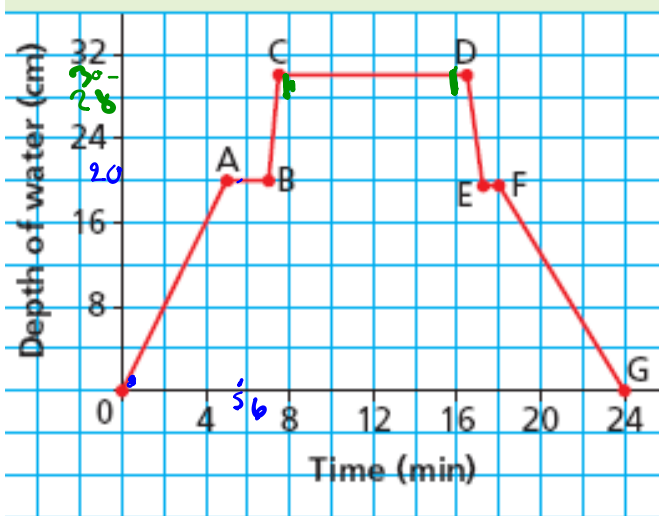
What was the greatest depth the diver reached?

For how many minutes was the diver at that depth?

A Scuba Diver's Dive



Depth of Water in a Bathtub



Given the graph shown at the left, provide a brief explanation of what could possibly be happening at each of the 7 segments labelled on the graph

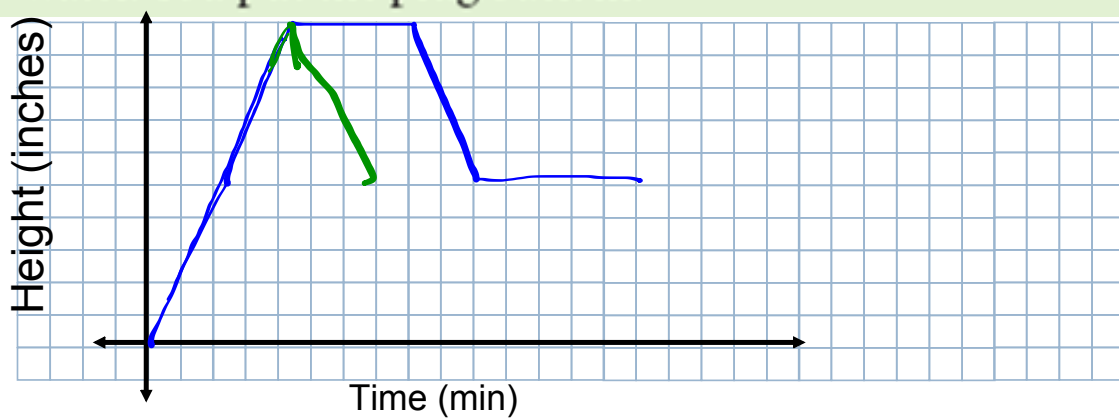
Start - A: over 5 mins filled tub to 20 cm.
 A - B: Shuts off water for 2 mins to peed get towel
 B - C: He gets in so water rise to 30 cm
 C - D: Washes for ~ 10 min
 D - E: Gets out water goes down to little less than 20cm b/c he splashed some out
 E - F: drying off ~ 1 min
 F - G: Drains tub.

Sketch a graph to represent this situation:

You put the plug in the bath and turn on the taps.

You leave the bathroom and return to discover that the bath has overflowed.

You turn off the taps and pull out the plug to let out some water. You put the plug back in.



Practice Problems...

p. 281: #3 - 6, 11, 16

Attachments

Worksheet - Function Notation.pdf