TOPIC 19-6: MORE FUNCTION APPLICATIONS WITH AREA & VOLUME

EXAMPLE 1: A rectangle has a perimeter of 100 feet and has sides x and y.

a) Express the area, A, of the rectangle as a function of x.

b) Find the area with x = 20 feet.

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EXAMPLE 2: An open box is to be made from a square piece of material 12 inches on a side by cutting equal squares of length x from each corner and turning up the sides.

a) Sketch a graph of the problem situation.

b) Express the volume, V, as a function of x.

c) Find the volume when x = 4 inches.