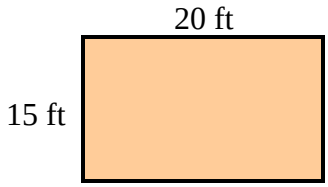
Name _____ Date _____ Hour _____ Class # _____

THINKING WITH MATHEMATICAL MODELS

INV 1 – ACE # 9, 10 pg. 16-17

9.) Below is a drawing of a rectangle with an **area** of 300 square feet.



A = L x W

A = 20 (15)

A = 300 ft^2

a) Draw three more rectangles. Label the dimensions so that they each have an **area** of 300 ft^2.

b) What is the width of a rectangle with an area of 300 ft^2 if its length is…

1 foot?

2 feet?

3 feet?

c) What is the width of a rectangle with an area of 300 ft^2 if its length is ***L*** feet? (hint: write it as an equation)

d) How does the width of a rectangle change if the length increases, but the area remains 300 ft^2?

Name _____ Date _____ Hour _____ Class # _____

THINKING WITH MATHEMATICAL MODELS

INV 1 – ACE # 9, 10 pg. 16-17 continued

10.) The rectangle pictured in problem 9 has a perimeter of 70 feet.

P = 2 L + 2 W	or	P = 2 (L + W)
P = 2(20) + 2(15)		P = 2 (20 + 15)
P = 40 + 30		P = 2 (35)
P = 70 ft		P = 70 ft

a) Make drawings of at least three other rectangles with a **perimeter** of 70 feet.

b) What is the width of a rectangle with a perimeter of 70 ft if its length is…

1 foot?

2 feet?

L feet? (hint: equation)

c) What is the width of a rectangle with a perimeter of 70 ft if its length is…

½ foot?

1 ½ foot?

d) Suppose the length of a rectangle increases, but the perimeter remains at 70 feet. Describe how the width changes.