Name _____ Date _____ Hour _____

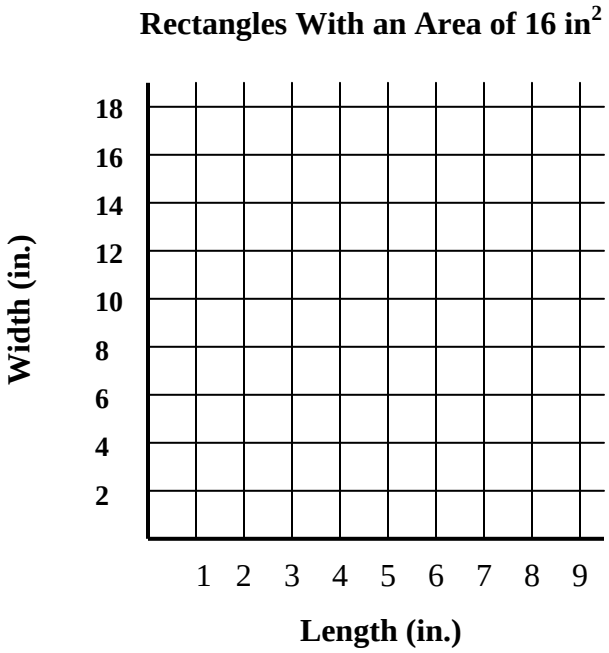
# THINKING WITH MATHEMATICAL MODELS

## INV 3 – ACE # 1, 2, 13-18, 20-25 pg. 53 - 57

1. a) Complete the table.

| Length (in.) | Width (in.) |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |

b.) Make a graph of the data from the table.




c.) Describe the pattern of change in width as the length increases.

d.) Write an equation that shows how the width ($w$) depends on the length ( $l$ ).

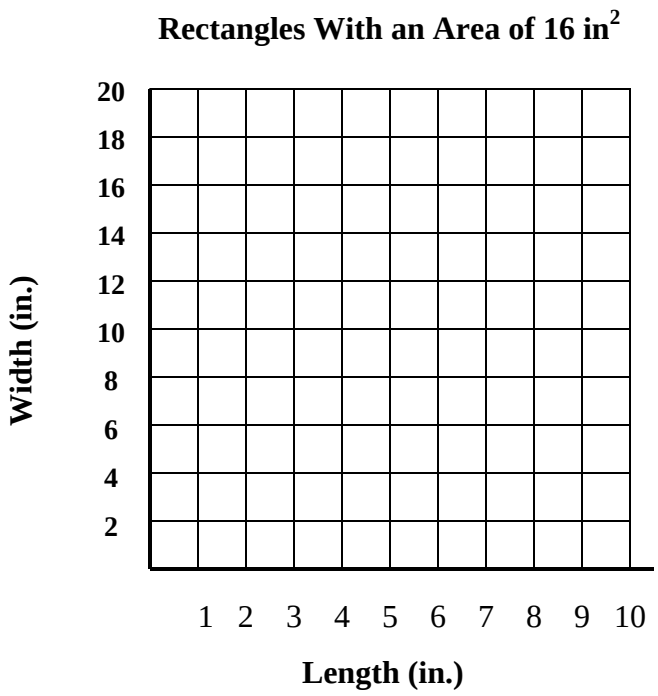
e.) Is the relationship linear? ***Explain*** how you know.

2.) Consider rectangles with an area of 20 square inches.

a) Make a table with data for at least **5 rectangles.**

| Length (in.) | Width (in.) |
|---|---|
| | |

b.) Make a graph of the data from the table.




c.) Write an equation that shows how the width (*w*) depends on the length ( *l* ).

d.) Is the relationship linear? ***Explain*** how you know.

e.) Compare this graph to the graph you made for ACE #1. How are they similar? How are they different?

f.) Compare the equation from this problem with the equation from ACE #1. How are they similar? How are they different?

Name _____ Date _____ Hour _____

# THINKING WITH MATHEMATICAL MODELS

## INV 3 – ACE # 1, 2, 13-18, 20-25 pg. 53 – 57 continued

Refer to page 57.

Define: **Additive Inverse**

For 13-18, find the additive inverse of each value.

13.) 14.) 15.)

16.) 17.) 18.)

Refer to page 57.

Define: **Multiplicative Inverse**

For 20-25, find the multiplicative inverse of each value.

20.) 21.) 22.)

23.) 24.) 25.)