### 5.2d Scale Factors and Area

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| --- | --- |
| 1. Mouse’s house is very small. His living room measures 2 feet by 4 feet. Draw his living room on the grid. Label the dimensions and the area.
2. Double-Dog’s living room dimensions are double Mouse’s living room. Draw his living room on the grid. Label the dimensions and the area.
3. Triple-Threat-Tiger’s living room is triple the dimensions of Double-Dog’s. Draw Tiger’s living room on the grid. Label the dimensions and the area.
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1. Fill in the table below with the dimensions and areas of the living rooms from the sketches above.

|  |  |  |
| --- | --- | --- |
| Homeowner | Living Room Dimensions (Length and Width) | Living Room Area |
| Mouse |  |  |  |
| Double-Dog |  |  |  |
| Triple-Threat-Tiger |  |  |  |

1. Compare measurements for Mouse and Double-Dog’s living rooms. Use scale factor in the comparison.
	1. the dimensions b. the area

1. Compare measurements for Double-Dog and Triple-Threat-Tiger’s living rooms. Use scale factor.
	1. the dimensions b. the area
2. Compare Mouse and Triple-Threat-Tiger’s living rooms. Use scale factor in the comparison.
	1. The dimensions b. the area

1. Generalize a rule related to the scale factors of dimensions and area. You might use “if…., then….”

For example: “If the dimensions of an object are multiplied by \_\_\_\_\_, the area will be multiplied by \_\_\_\_\_.”

1. If the area of Mouse’s **kitchen** is 12 square feet, and the dimensions of Double-Dog’s kitchen are twice as big as the dimensions of Mouse’s, what will the area of Double-Dog’s kitchen be?
2. If the dimensions of Triple-Threat-Tiger’s kitchen are three times the dimensions of Double-Dog’s, what will the area of Triple-Threat-Tiger’s kitchen be?
3. If the area of Mouse’s bathroom is 5 square feet, the dimensions of Double-Dog’s bathroom are twice Mouse’s, and Triple-Tiger’s are three times Double-Dog’s, what will the area of Triple-Threat-Tiger’s bathroom be? Is there a shortcut?

**Exit Ticket:**

**What I might need some more help with:**

**How I feel about scale factor:**

  

**What I would like to tell Mrs. Hyde:**