|  |  |
| --- | --- |
| My rubber band touches this many pegs | The area of my shape is |
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|  |  |
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|  |  |

Pick’s Theorem

**Step 1**: Make some shapes using your rubber band on your peg board. For these shapes, there can not be any pegs on the interior of the shape. Record your data.

Look at the data from your experiment. What pattern do you see? Describe it in a sentence.

Can you write a formula?

**Step 2**: Make some shapes using your rubber band on your peg board. For these shapes, there can be one peg in the interior. Record your data.

|  |  |  |
| --- | --- | --- |
| My rubber band touches this many pegs | There are this many pegs on the interior | The area of my shape is |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Look are the data from your experiment. Do you see any patterns? Describe any patterns that you do see in words. How has your pattern changed?

Try to write a formula.

**Step 3**: Make some shapes using your rubber band on your peg board. For these shapes, there can be two pegs in the interior. Record your data.

|  |  |  |
| --- | --- | --- |
| My rubber band touches this many pegs | There are this many pegs on the interior | The area of my shape is |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Look are the data from your experiment. Do you see any patterns? Describe any patterns that you do see in words. How has your pattern changed?

**Step 4**: Make some shapes using your rubber band on your peg board. For these shapes, there can be any number of pegs in the interior. Record your data.

|  |  |  |
| --- | --- | --- |
| My rubber band touches this many pegs | There are this many pegs on the interior | The area of my shape is |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Now, look at ALL of your data. Look for a GENERAL FORMULA that will always work to predict the area of any shape on a peg board from the number of exterior and interior pegs.