**Straws and Connectors Worksheet 1- Growing Segments**

**Pattern 1**

**Figure 1 Figure 2 Figure 3**

**What do you notice?**

**What do you wonder?**

**Straws and Connectors Worksheet 1- Growing Segments**

1. **Visual Pattern. Draw figure 4**

**Figure 1 Figure 2 Figure 3 Figure 4**

1. **Table**

|  |  |  |
| --- | --- | --- |
| **Figure Number (n)** | **Number of Connectors(C)** | **Number Of Straws(S)** |
| *1* | *2* | *1* |
| *2* | *3* | *2* |
| *3* | *4* | *3* |
| *4* |  |  |
| *5* |  |  |
| *10* |  |  |
| *20* |  |  |
| *n* |  |  |

1. **a) Rule in words for finding the number of connectors for any figure number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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1. **b) Rule in words for finding the number of straws for any figure number\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**IV . Rule in Symbols**

1. Rule for Connectors b) Rule for Straws
2. **Graph** . Plot each set of ordered pairs on the same coordinate plane. Connect all points on each set with dotted line . 

Set 1

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| --- |
| **(n,C)** |
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Set 2

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| --- |
| **(n,S)** |
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1. **Describe each graph.**

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1. **Why do you think that the points are connected by dotted line and not by a solid line?**

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1. **What geometric relationship exists between the two graphs?**

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1. **What conclusion can you make about the two equations and their graphs?**

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1. **Jimmy has one dollar in his piggy bank. Each day he will put a dollar into his piggy bank. In how many days can Jimmy have $61 in his piggy bank? Explain or show your solution.**

**Straws and Connectors Worksheet 1- Growing Segments**

1. **Visual Pattern. Draw figure 4**

**Figure 1 Figure 2 Figure 3 Figure 4**

1. **Table**

|  |  |  |
| --- | --- | --- |
| **Figure Number (n)** | **Number of Connectors(c)** | **Number Of straws(s)** |
| *1* | *2= 2 + 0* | *1* |
| *2* | *3= 2 + 1* | *2* |
| *3* | *4= 2 + 2* | *3* |
| *4* | *5= 2 + 3* | *4* |
| *5* | *6= 2 + 4* | *5* |
| *10* | *11= 2 + 9* | *10* |
| *20* | *21= 2 + 19* | *20* |
| *n* | *2 + (n-1) = n + 1* | *n* |

1. **a) Rule in words for finding the number of connectors for any figure number**

***The number of connectors for any figure number is equal to the figure number increased by 1.***

**b) Rule in words for finding the number of straws for any figure number**

***The number of connectors for any figure number is equal to the figure number***

**IV . Rule in Symbols**

1. Rule for Connectors b) Rule for Straws

C = n+ 1 S = n

