Materials: Cylindrical container, plastic centimeter cubes, glass beads, water, centimeter ruler.

**You will do this experiment with *2 different* containers.**

**100mL Graduated Cylinders**

-Start at 50 mL and add 3 glass beads each time.

**Medium Jars (Snapple/Spaghetti Sauce size)**

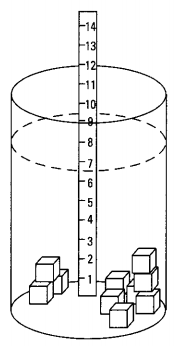
-Start at 4cm and add 10 cubes each time.

**Small Jars (Baby food size)**

-Start at 3cm and add 5 cubes each time.

**Large Jars**

-Start at 4 cm and add 30 cubes each time.

1. With one of the containers above. Fill the container with the appropriate amount of water and place the ruler inside. Be sure to measure as accurately as you can to the hundredth of a centimeter. (Go significant figures!)
2. Drop the appropriate number of cubes in for the 1st step. (This depends on the type of container you have.) Record the water level in the table below.
3. Keep adding cubes and recording the water level until you complete the table.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of Cubes** | **0** |  |  |  |  |  |  |
| **Water Level** |  |  |  |  |  |  |  |

1. Graph the points
2. Draw a line of best fit for the points   
   on your graph.
3. What is the y-intercept of your line?   
   What does it represent in your situation?

Water Level

1. What is the slope of your line?   
   What does it represent in your situation?

Number of Cubes

1. Find an equation relating the water level and   
   the number of cubes.

**100mL Graduated Cylinders**

-Start at 50 mL and add 3 glass beads each time.

**Medium Jars (Snapple/Spaghetti Sauce size)**

-Start at 4cm and add 10 cubes each time.

**Small Jars (Baby food size)**

-Start at 4cm and add 5 cubes each time.

**Large Jars**

-Start at 4 cm and add 30 cubes each time.

1. Choose a different container than you chose in #1. Fill the container with the appropriate amount of water and place the ruler inside. Be sure to measure as accurately as you can to the hundredth of a centimeter. (Go significant figures!)
2. Drop the appropriate number of cubes in for the 1st step. (This depends on the type of container you have.) Record the water level in the table below.
3. Keep adding cubes and recording the water level until you complete the table.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of Cubes** | **0** |  |  |  |  |  |  |  |
| **Water Level** |  |  |  |  |  |  |  |  |

1. Graph the points



1. Draw a line of best fit for the points   
   on your graph.
2. What is the y-intercept of your line?   
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Water Level

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Number of Cubes

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