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

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

**Graduated Cylinders**

-Start at 60 mL and add 5 cubes each time.

**Metal Soup Cans / Glass Snapple Containers**

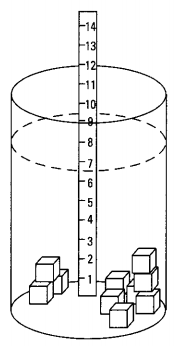
-Start at 4cm and add 10 cubes each time.

**International Coffee Cans   
(small rectangular)**

-Start at 3cm and add 20 cubes each time.

**Large Coffee Cans / Large Glass Containers**

-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 0.1 cm.
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.
4. Graph the points

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



1. Draw a line of best fit through the points   
   on your graph.
2. 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?
2. Find an equation relating the water level and   
   the number of cubes.

Number of Cubes

**Graduated Cylinders**

-Start at 60 mL and add 5 cubes each time.

**Metal Soup Cans / Glass Snapple Containers**

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

**International Coffee Cans   
(small rectangular)**

-Start at 3cm and add 20 cubes each time.

**Large Coffee Cans / Large Glass Containers**

-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 0.1 cm.
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.
4. Graph the points

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



1. Draw a line of best fit through the points   
   on your graph.
2. 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.