What soil type do you think will hold the most water?

After observing each soil sample, which do you think will retain the most water? _____

Materials:

- Samples of sand, Soil^3, gravel, clay
- 5 graduated cylinders or canning jars (one for measuring water, 4 for funnels)
- 4 funnels (if you don't have funnels you can cut the top off of water bottles and invert)
- 4 coffee filters
- Stop watch
- Water source

Directions:

1. Measure 50 mL of water in one cylinder.
2. Place a funnel in the opening of each cylinder.
3. Place a coffee filter in each funnel.
4. Put a sample of soil in each filter. (One sample per cylinder.)
5. Pour 50 mL of water into each of the funnels containing soil samples.
6. Set the time for 2 minutes. This will allow time for the water to pass through the coffee filter into the graduated cylinder.
7. Record your observations.
8. Create a graph representing your data.
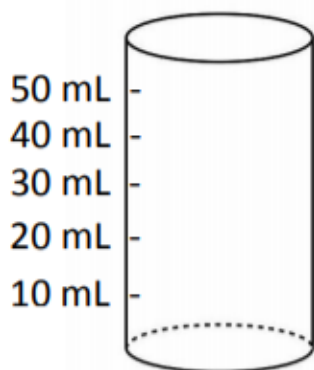
My Observations

Soil Sample #1 _____
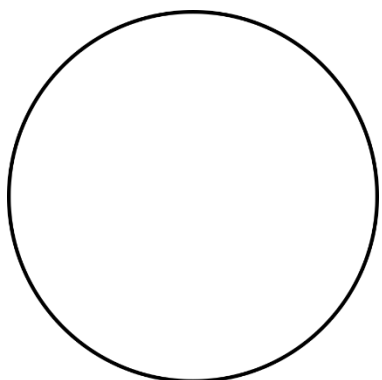
Draw your soil sample here.

Size of particles_____
(large, medium, small, mixed)

Color of particles_____

Retention of Water
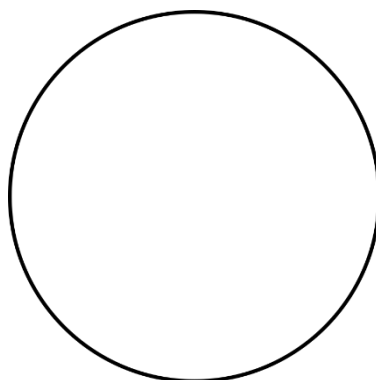
50 mL -
40 mL -
30 mL -
20 mL -
10 mL -

Amount of water poured in Funnel: 50 mL

Amount of water in graduated cylinder: _____

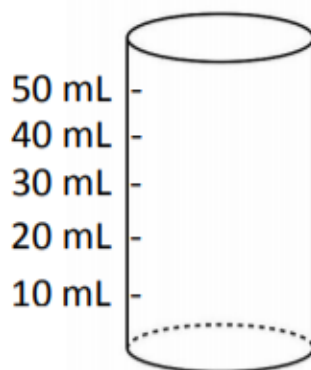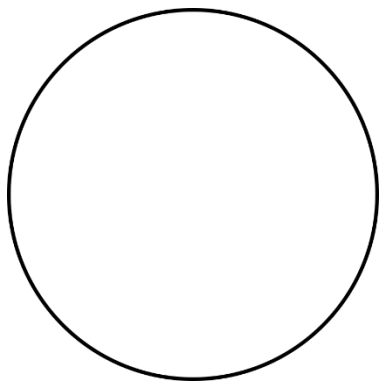Amount of water retained by soil: _____

Soil Sample #2 _____

Draw your soil sample here.

Size of particles_____
(large, medium, small, mixed)

Color of particles_____

Retention of Water

50 mL -
40 mL -
30 mL -
20 mL -
10 mL -

Amount of water poured in Funnel: 50 mL

Amount of water in graduated cylinder: _____

Amount of water retained by soil: _____

Soil Sample #3 _____	Soil Sample #4 _____

Draw your soil sample here.

Size of particles_____
(large, medium, small, mixed)

Color of particles_____

Retention of Water

50 mL -
40 mL -
30 mL -
20 mL -
10 mL -

Amount of water poured in Funnel: 50 mL

Amount of water in graduated cylinder: _____

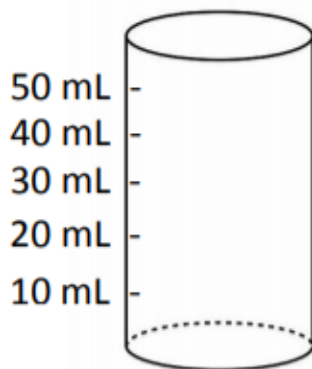Amount of water retained by soil: _____

Draw your soil sample here.

Size of particles_____
(large, medium, small, mixed)

Color of particles_____

Retention of Water

50 mL -
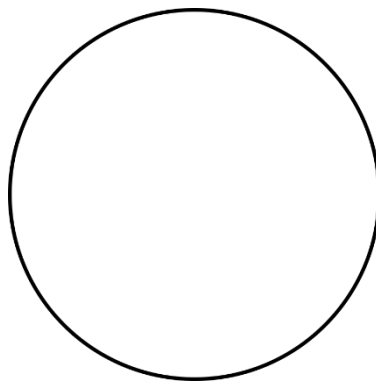40 mL -
30 mL -
20 mL -
10 mL -

Amount of water poured in Funnel: 50 mL

Amount of water in graduated cylinder: _____
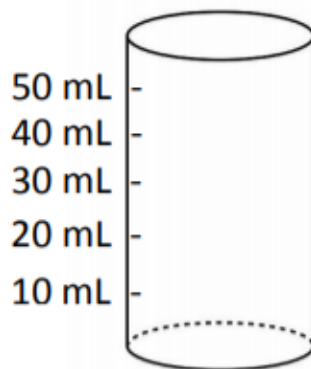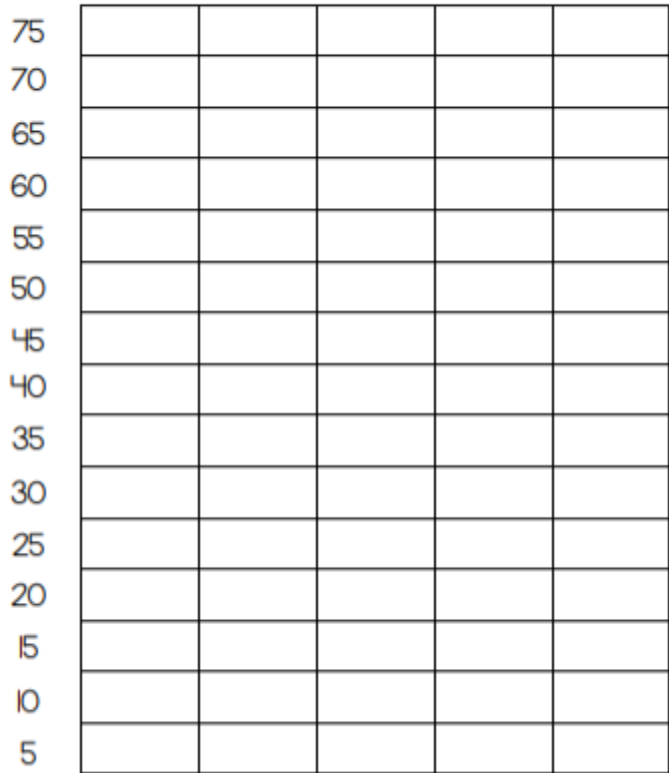
Amount of water retained by soil: _____

Soil Type	Amount of Water Poured into Funnel	Amount of Water in Graduated Cylinder after 2 minutes	Amount of Water Retained by Soil
1			
2			
3			
4			

_____
(Title)

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75
70
65
60
55
50
45
40
35
30
25
20
15
10
 5
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____ ____ ____ ____ ____

Conclusion

_____
_____
_____
_____

How could you increase the reliability of this experiment?

_____
_____
_____
_____