

Soils and Plant Nutrients Chapter 2 Homework

1. Soil Squeeze Test

Find three different locations in your yard to take samples. Moisten the soil (not too wet) and take a handful of it and squeeze. Note in the table below your results.

- a. If it holds its shape and does not break apart when poked you have a clay soil.
- b. If it does not hold its shape and crumbles immediately it is a sandy soil.
- c. If it holds its shape but crumbles when poked it is a loamy soil.

2. Soil Percolation Test

- a. In those same three locations dig a hole 6 inches wide and 1 foot deep.
- b. Fill the holes with water and let them drain completely.
- c. Fill the holes with water again and time how long it takes for them to drain completely. Make a note on your chart. Longer than 4 hours and you have poor drainage.

Location	Soil Squeeze Test Type	Percolation Results (time)

What observations can you make about the soil squeeze type and the percolation time?

3. Soil Texture- Jar Test

You will need a clean, clear, straight sided jar with a lid, a permanent marker, powdered dish detergent and a ruler.

- a. Fill your jar to 1/3 with a soil that has been sifted and debris and rocks have been removed.
- b. Fill the jar leaving some headspace with clean water.
- c. Put the lid on the jar and shake vigorously for 1 minute.
- d. Set the jar in a location where it will not be disturbed for 24-48 hours.
- e. Using the permanent marker, make a line at each of the layers in the jar and measure the heights.
 - 1) The first layer is the heaviest, sand.
 - 2) The next is the silt/loam layer.
 - 3) The last layer is from the tiniest, lightest particles, clay.

Overall soil height = _____ inches

Sand = _____ inches

Silt/Loam = _____ inches

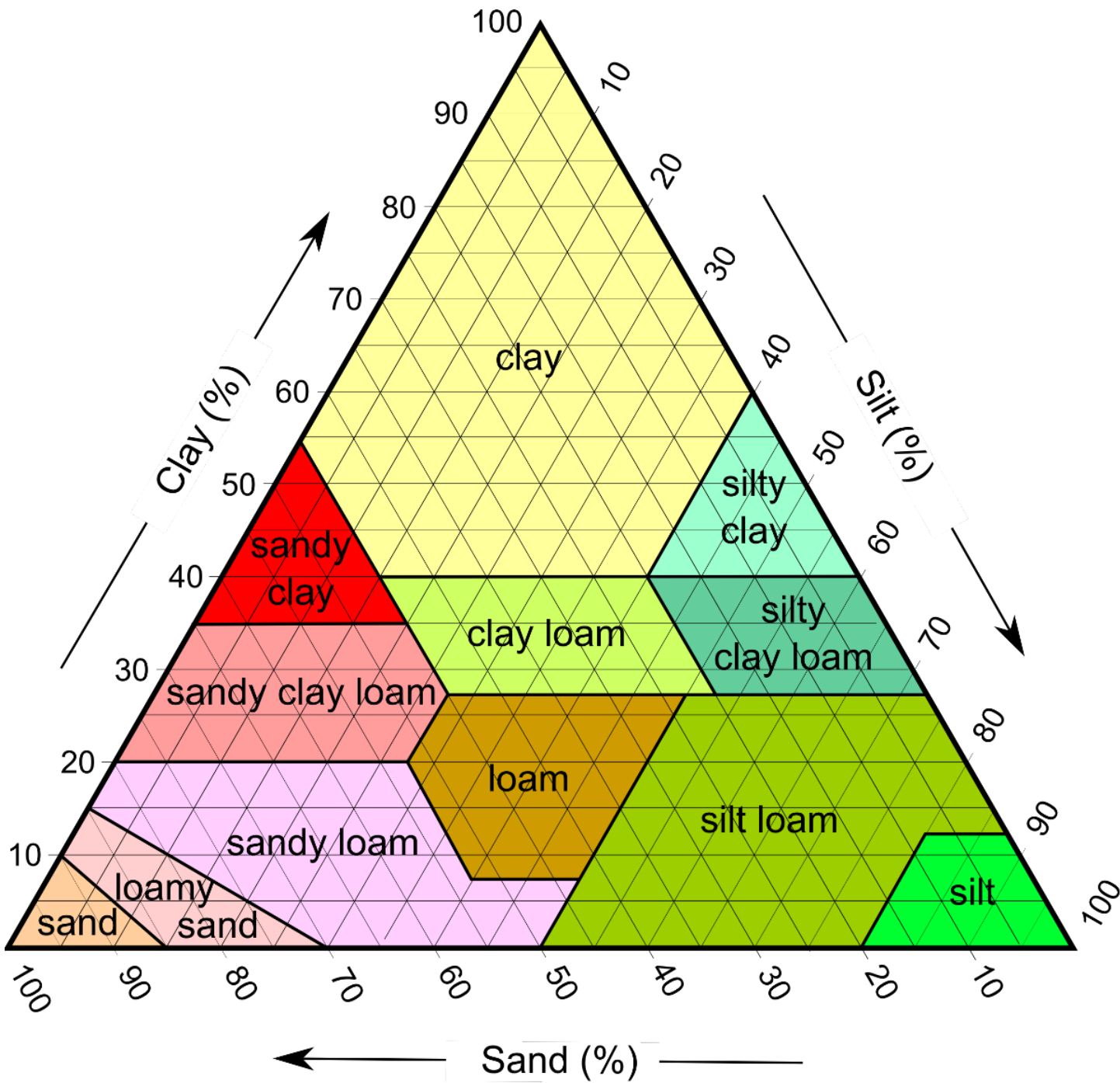
Clay = _____ inches

Using these numbers, calculate the percentage of

_____ % Sand _____ % Silt/Loam _____ % Clay

Refer to the Soil Triangle (Figure 1-7. in your textbook) to determine your soil type.

Soil Type: _____



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