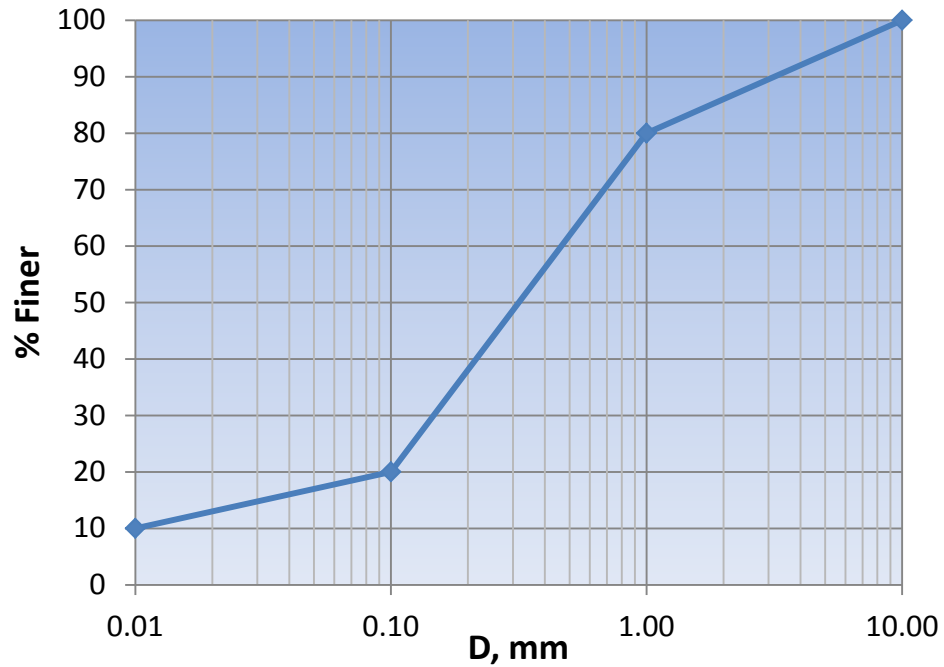


1. The dry density of a soil sample of sand with porosity of 0.387 is 1600 kg/m^3 . Find the void ratio of the soil and the specific gravity of the soil solids.
2. The following figure shows GSD curve for a given soil.



Determine:

- a. Gravel fraction
- b. Sand fraction
- c. Fine fraction

3. A sample of soil was tested in the laboratory and the following grain-size analysis results were obtained:

US Standard Sieve No.	Percent Coarser by Weight
4	37
10	52
20	64
40	69
60	71
100	77
200	90
Pan	100

- a. Plot grain size distribution (GSD) curve by using a computer program.

Determine:

- b. Gravel fraction
c. Sand fraction
d. Fine fraction