Part 6 ## Measuring the Density of Rocks
You will need a piece of graph paper to complete these questions.

1. On a geology field trip, Blanca found three rocks made of the same type of material. She measured the mass and volume of each rock. Her data table is shown at the right. Plot the data on a piece of graph paper. Put Mass (*M*) on the vertical axis and Volume (*V*) on the horizontal axis. Scale your axes so that *M* goes up to 100 g and *V* goes up to 30 cc.

Rock Density Measurement Data

Rock	Volume (cc)	Mass (g)
A	3	8.5
B	5	15
C	21	60

2. Use a point on the line to find the ratio of mass to volume for this kind of rock.

3. Would you expect the rocks to sink or float in water? Why? Remember, the ratio of mass to volume of water is $\frac{1\,g}{1\,cc}$ (or 1 g/cc).

4. On the field trip, Blanca also found a bigger rock of the same material. This rock is too big to fit in the graduated cylinder. She knows the mass of the rock is 80 grams. Use your graph to find the volume of this rock.

5. A rock made of the same material has a volume of 15 cc. What is its mass? Explain how you found your answer.

6. If a rock made of the same material has a volume of 40 cc, what is its mass? Show your solution strategy.