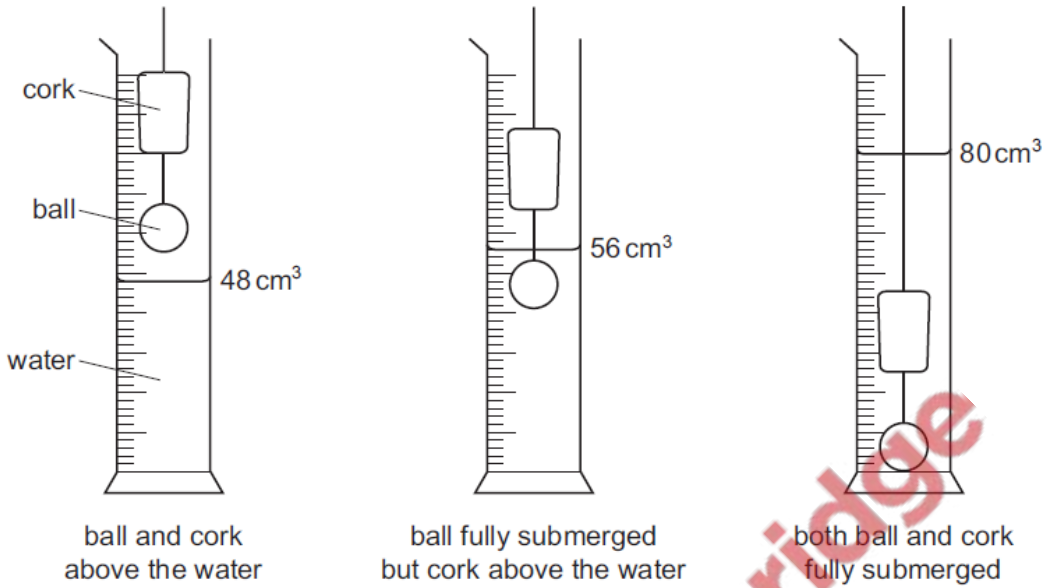
Density – 2020 IGCSE 0625

1. Nov/2020/Paper_11/No.6

A metal ball is attached to a cork and is lowered into a measuring cylinder, pulling the cork into the water, as shown.



ball and cork above the water

ball fully submerged but cork above the water

both ball and cork fully submerged

The mass of the cork is 4.8 g.

What is the density of the cork?

A 0.15 g / cm³ **B** 0.20 g / cm³ **C** 0.60 g / cm³ **D** 5.0 g / cm³

2. Nov/2020/Paper_12/No.6

A rectangular metal block is 20 cm long.

The cross-sectional area of the block is 25 cm².

The mass of the block is 4000 g.

What is the density of the metal?

A 0.13 g / cm³ **B** 0.32 g / cm³ **C** 8.0 g / cm³ **D** 2000 g / cm³

3. Nov/2020/Paper_13/No.6

A student is asked to predict whether a solid floats in a liquid.

Which information does the student require?

A the density of the liquid and the mass of the solid

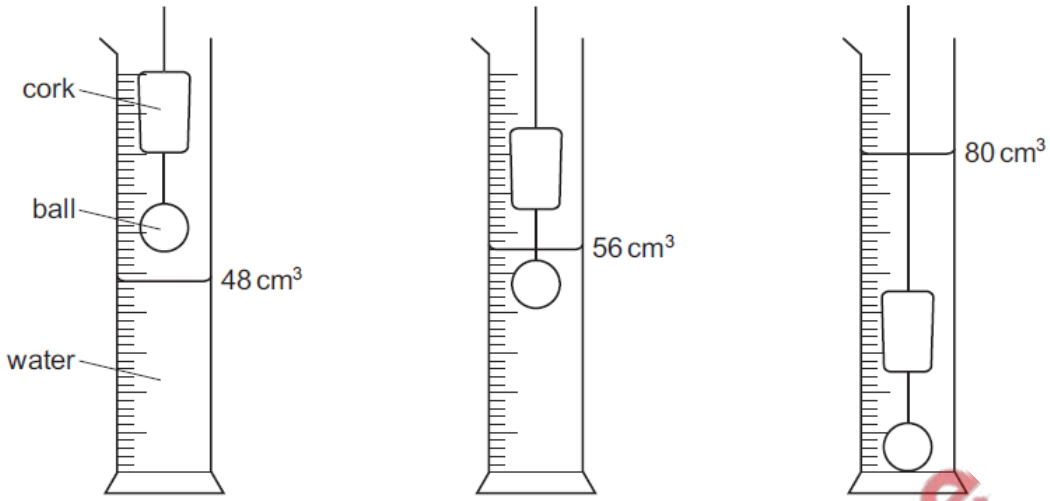
B the density of the solid and the density of the liquid

C the density of the solid and the mass of the liquid

D the mass of the solid and the mass of the liquid

4. Nov/2020/Paper_21/No.6

A metal ball is attached to a cork and is lowered into a measuring cylinder, pulling the cork into the water, as shown.



ball and cork above the water

ball fully submerged but cork above the water

both ball and cork fully submerged

The mass of the cork is 4.8 g.

What is the density of the cork?

A 0.15 g / cm³ **B** 0.20 g / cm³ **C** 0.60 g / cm³ **D** 5.0 g / cm³

5. Nov/2020/Paper_22/No.6

A rectangular metal block is 20 cm long.

The cross-sectional area of the block is 25 cm².

The mass of the block is 4000 g.

What is the density of the metal?

A 0.13 g / cm³ **B** 0.32 g / cm³ **C** 8.0 g / cm³ **D** 2000 g / cm³

6. Nov/2020/Paper_23/No.6

A square wooden raft floats on a lake. The density of the water in the lake is 1000 kg / m³.

The sides of the raft are 2.0 m long and the thickness of the raft is 0.20 m.

The mass of the raft is 700 kg.

How many barrels, each of mass 100 kg, could be placed on the raft before its surface sinks to the surface of the water?

A 1 **B** 7 **C** 8 **D** 15