WorksheetCloud.com - Memorandum 1

Subject: Grade 8 Natural Sciences
Topic: Density
Total: 42 Marks

---

1. metal | wood | plastic | foam — 8 marks

Explanation:
The particles in metal are packed the closest and in foam the particles are packed very loosely.

---

2. B are greater than that of A | A has more particles than B — 4 marks

Explanation:
Density is a measure of the mass of the particles and how closely packed the particles are. Because B can float on water but not A, it means that A has a greater density. Since the volume of A and B are the same, and a particle of A has the same mass as a particle of B, it stands to reason that A has more particles and/or they are more closely packed than the particles of B.

---

3. A: 1. 25 g/cm^3 — 4 marks

Explanation:
density = mass ÷volume
5 kg = 5000 g (mass must be converted to grams)
D = m/V
= 5000 g ÷4000 cm^3
= 1. 25 g/cm^3

---

4. particles | closer — 4 marks

Explanation:
The particles of iron are packed more closely making iron more dense than plastic.

---

5. v = mass/density | v = m/D | v = mass ÷ density | v = m ÷ D | v = mass divided by density | v = m divided by d — 3 marks

Explanation:
density = mass/volume
by rearranging the formula to make volume the subject:
volume = mass/density

---

6. less | lower — 3 marks

Explanation:
Mass is a measure of the amount of matter of a substance. The greater the mass, the more the amount of matter in the same volume. Density = mass/volume, so if the mass of substance B is less than that of A in the same volume, then its density will be less.

7. liquid | gas | solid 6 marks

Explanation:
The particles of a gas are spaced far apart, particles in a liquid are spaced closer together and particles in a solid are the closest together.

---

8. grams | g | gram 3 marks

Explanation:

---

9. B: 5 g/cm^3 4 marks

Explanation:
density = mass/volume
5 kg = 5000 g (the mass must be converted to grams)
D = m/V
= 5000 g/1000 cm^3
= 5 g/cm^3

---

10. sink 3 marks

Explanation:
All objects more dense than water will sink when placed in water. If the object is less dense than water it will sink.

Total: 42 Marks