



**Subject:** Grade 8 Natural Sciences

**Topic:** Density

**Total:** 42 Marks

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Question 1: Please Fill In The Blanks**

8 marks

The following objects have the same volume. Arrange them in order from a high density to a low density.

The object with the highest density is (1), followed by (2) and then (3). The object with the lowest density is (4) .

Possible Answers: wood | foam | plastic | metal

<b>1</b>	
<b>3</b>	

<b>2</b>	
<b>4</b>	

**Question 2: Please Fill In The Blanks**

4 marks

Substance A and B have the same volume and the mass of each particle of A is the same as those of B. It is found that only B will float on water, A will sink.

This means that the spaces between the particles of (1) and (2) .

Possible Answers: A has more particles than B | B has more particles than A | A are greater than that of B | B are greater than that of A

<b>1</b>	
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<b>2</b>	
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**Question 3: Multiple Choice**

4 marks

A steel sphere has a volume of  $4000 \text{ cm}^3$  and weighs 5 kg.

What is the density of the sphere?

<b>A</b>	1. 25 g/cm <sup>3</sup>
<b>B</b>	0. 8 g/cm <sup>3</sup>
<b>C</b>	125 g/cm <sup>3</sup>
<b>D</b>	8 g/cm <sup>3</sup>

**Question 4: Please Fill In The Blanks**

4 marks

The (1) in a block of iron are packed much (2) than the particles in a block of plastic.

Possible Answers: looser | particles | volume | mass | closer

1	
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2	
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**Question 5: Text Input**

3 marks

If given the mass and density of a substance, complete the following formula to determine the substance's volume:  $V = \dots$

Use **D** as the symbol for density **AND** start your answer with **v = .**

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**Question 6: Text Input**

3 marks

Substance A has more matter than substance B in the same volume. This means that the density of B is ... than that of A.

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**Question 7: Please Fill In The Blanks**

6 marks

A (1) is more dense than a (2) , but a (3) is the most dense of all.

Possible Answers: gas | liquid | solid

1	
3	

2	
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**Question 8: Text Input**

3 marks

The unit in which density is measured is ... per cubic centimetre.

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**Question 9: Multiple Choice**

4 marks

A block of iron weighs 5 kg and has a volume of 1 000 cm<sup>3</sup>.

What is the density of this block of iron.

- |          |                          |
|----------|--------------------------|
| <b>A</b> | 0. 005 g/cm <sup>3</sup> |
| <b>B</b> | 5 g/cm <sup>3</sup>      |
| <b>C</b> | 50 g/cm <sup>3</sup>     |
| <b>D</b> | 0. 05 g/cm <sup>3</sup>  |
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**Question 10: Text Input**

3 marks

If an object is more dense than water, it will ... when placed in the water.

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**Total: 42 Marks**