

**AQA, OCR, Edexcel**

**GCSE**

# **GCSE Maths**

## Density and Pressure Questions

Name:

**M**

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Total Marks:

## Density and Pressure

1. If a carton of juice weighs 0.9kg and it has a volume of 1.5 L, what is the density of the juice? Show your working

(2 Marks)

2. A system has a pressure of  $5 \text{ N/m}^2$ . If a force of 2000N is applied, what is the area that the force is applied to? Please state your units.

(3 marks)

3. Mercury has a density of  $14 \text{ g/cm}^3$ . How much would a sphere of mercury of radius 3 cm weigh.

(4 Marks)

4. The force applied to a 0.4m by 0.8m break pad produces a pressure of  $500 \text{ N/m}^2$ . Calculate the force applied to the break pad.

(3 Marks)

5. 6 jam jars of volume  $0.37\text{m}^3$  are filled with Jam. An empty jam jar has a weight 200g each. The weight of all 6 jars filled with jam 5400g. Use this information to calculate the density of Jam? **(Hard)**

(5 Marks)