

1. Write the name for the SI unit of
 - (a) mass
 - (b) time
 - (c) electric current

2. The multiple of mega, M, is 10^6 .
Write the multiple of
 - (a) giga, G
 - (b) tera, T

3. The submultiple of milli, m, is 10^{-3} .
Write the submultiple of
 - (a) micro, μ
 - (b) pico, p

4. Some SI units are shown.

m	N	ms⁻¹	V	J
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 Write the units from this list that are expressed as base SI units.

5. (a) Which one of these is a reasonable estimate of the weight of an apple?

A	0.1 N
B	1 N
C	10 N
D	100 N

 (b) Which one of these is a reasonable estimate of the kinetic energy of a car?
 (Kinetic energy = $\frac{1}{2}mv^2$)

A	2 J
B	20 J
C	200 J
D	2000 J

6. Explain the meaning of
 - (a) accuracy
 - (b) precision

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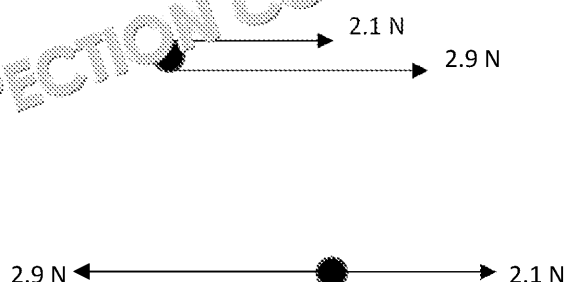
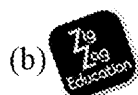
7. A student uses a measuring cylinder to measure the volume of a liquid calibrated in intervals of 1 cm^3 . The student determines that the volume is 25 cm^3 .
- State the absolute uncertainty in this measurement.
 - Calculate the percentage uncertainty in this measurement. Give your answer to two significant figures.
 - The student measures the mass and the volume of a different liquid. These measurements are:
 - mass 1.2 g
 - volume 2.6 cm^3

The student uses these measurements to calculate the density of the liquid.

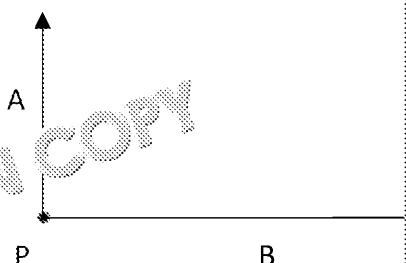


Calculate the percentage uncertainty in the density result.

8. A student plots a graph and draws a straight line of best fit. The gradient of the line is 2.5 . The student then draws a line of worst fit on the same graph. The gradient of this line is 1.5 . Calculate the percentage uncertainty in the gradient.
9. Which one of these is a vector quantity?
A mass **B** kinetic energy **C** speed
10. Explain the difference between distance and displacement.
11. State the magnitude and direction of the resultant force in each of the following.



12. The diagram shows two forces, **A** and **B**, acting at 90° to each other in the same plane.



Copy the diagram and show how a vector triangle can be used to determine the resultant force **R**.
 You do **not** have to make a scale drawing.

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Preview of Questions Ends Here

This is a limited inspection copy. Sample of questions ends here to avoid students previewing questions before they are set. See contents page for details of the rest of the resource.