1. Write the name for the SI unit of
   (a) length
   (b) temperature
   (c) amount of substance

2. The multiple of tera, T, is 10^{12}
   Write the multiple of
   (a) kilo, k
   (b) M

3. The submultiple of pico, p, is 10^{-12}
   Write the submultiple of
   (a) nano, n
   (b) milli, m

4. Some SI units are shown.
   kg **ms^{-2}** **C** **W** **Nm^{-2}** **Hz**
   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 mass of a car?
   A 10 kg
   B 100 kg
   C 1000 kg
   D 10 000 kg

   (b) Which one of these is a reasonable estimate of a person's walking
   A 0.1 ms^{-1}
   B 1 ms^{-1}
   C 10 ms^{-1}
   D 100 ms^{-1}

6. The acceleration of free fall is accepted to be 9.81 ms^{-2}
   A student determines the acceleration of free fall by experiment and r

experiment number	acceleration of free fal
1	8.25
2	8.27
3	8.31
4	8.29
5	8.30

   (a) Comment on both the *accuracy* and the *precision* of these results.
   (b) Calculate the absolute uncertainty in these results.
   (c) Use your value from (b) to calculate the percentage uncertainty i

7. A student has two measurements with percentage uncertainties:
   - distance 2.8 %
   - time 5.1 %

   The student uses these measurements to calculate speed using the e

   Calculate the percentage uncertainty in the speed

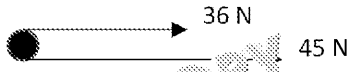
8. A student plots a graph and draws a straight line of best fit. The stu
   worst fit and uses the graph to determine
   - the best intercept to be 16.9
   - the worst intercept to be 20.0

   Calculate the percentage uncertainty in the intercept value.

9. Which one of these is a scalar quantity?
   A displacement **B** acceleration **C** kinetic e

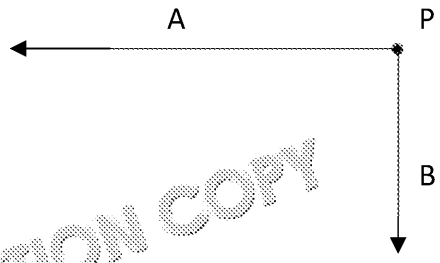
10. Explain the difference between speed and velocity.

11. State the magnitude and direction of the resultant force in each of th
    (a)



    (b)

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



    Copy the diagram and show how a vector triangle can be used to de
    you state force **R**.
    You **not** have to make a scale drawing.

Preview of Questions Ends Here