

Mark schemes

Q1.

- (a) the point at which weight may be considered to act
allow the point through which the line of action of the weight acts
- or**
- the point where the mass appears to be concentrated
allow the point at which the mass is concentrated 1
- (b) mass of 5 tomatoes = 0.425 (kg) 1
- mass of 1 tomato = 0.085 (kg)
allow an incorrect and / or not converted reading correctly divided by 5 1
- $W = (0.085 \times 9.8) = 0.833$ (N)
allow a correct calculation using their value of mass 1
- (c) $6.0 = k \times 0.015$ 1
- $k = \frac{6.0}{0.015}$
allow correct rearrangement using an incorrectly calculated value of e 1
- $k = 400$ (N/m)
allow a correct calculation using an incorrectly calculated value of e 1
- (d) deforms elastically 1
- (so) will return to its original length / shape (after force is removed)
- OR**
- compression is directly proportional to the force (applied) (1)
- (so) gives a linear scale (1)
allow easy to calibrate 1