3 In making reasonable estimates of physical quantities, which statement is **not** correct?

A The frequency of sound can be of the order of GHz.

B The wavelength of light can be of the order of 600 nm.

C The Young modulus can be of the order of 10^{11} Pa.

D Beta radiation is associated with one unit of negative charge.

4 The uncertainty in the value of the momentum of a trolley passing between two points X and Y varies with the choice of measuring devices.

Measurements for the same trolley made by different instruments were recorded.

    1   distance between X and Y using a metre rule with cm divisions = 0.55 m

    2   distance between X and Y using a metre rule with mm divisions = 0.547 m

    3   timings using a wristwatch measuring to the nearest 0.5 s at X = 0.0 s and at Y = 4.5 s

    4   timings using light gates measuring to the nearest 0.1 s at X = 0.0 s and at Y = 4.3 s

    5   mass of trolley using a balance measuring to the nearest g = 6.4×10^{-2} kg

    6   mass of trolley using a balance measuring to the nearest 10 g = 6×10^{-2} kg

Which measurements, one for each quantity measured, lead to the least uncertainty in the value of the momentum of the trolley?

A 1, 3 and 6   **B** 1, 4 and 6   **C** 2, 3 and 6   **D** 2, 4 and 5

Space for working