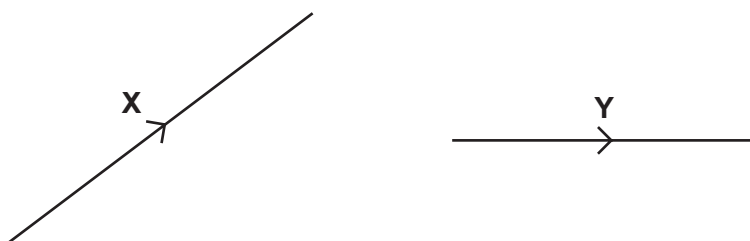


- 1 The equation relating pressure and density is $p = \rho gh$.

How can both sides of this equation be written in terms of base units?

- A $[\text{N m}^{-1}] = [\text{kg m}^{-3}] [\text{m s}^{-1}] [\text{m}]$
B $[\text{N m}^{-2}] = [\text{kg m}^{-3}] [\text{m s}^{-2}] [\text{m}]$
C $[\text{kg m}^{-1} \text{s}^{-2}] = [\text{kg m}^{-3}] [\text{m s}^{-2}] [\text{m}]$
D $[\text{kg m}^{-1} \text{s}^{-1}] = [\text{kg m}^{-1}] [\text{m s}^{-2}] [\text{m}]$
- 2 What is a reasonable estimate of the diameter of an alpha particle?
- A 10^{-15} m B 10^{-12} m C 10^{-9} m D 10^{-6} m
- 3 The diagram shows two vectors **X** and **Y**.



In which vector triangle does the vector **Z** show the magnitude and direction of vector **X–Y**?

