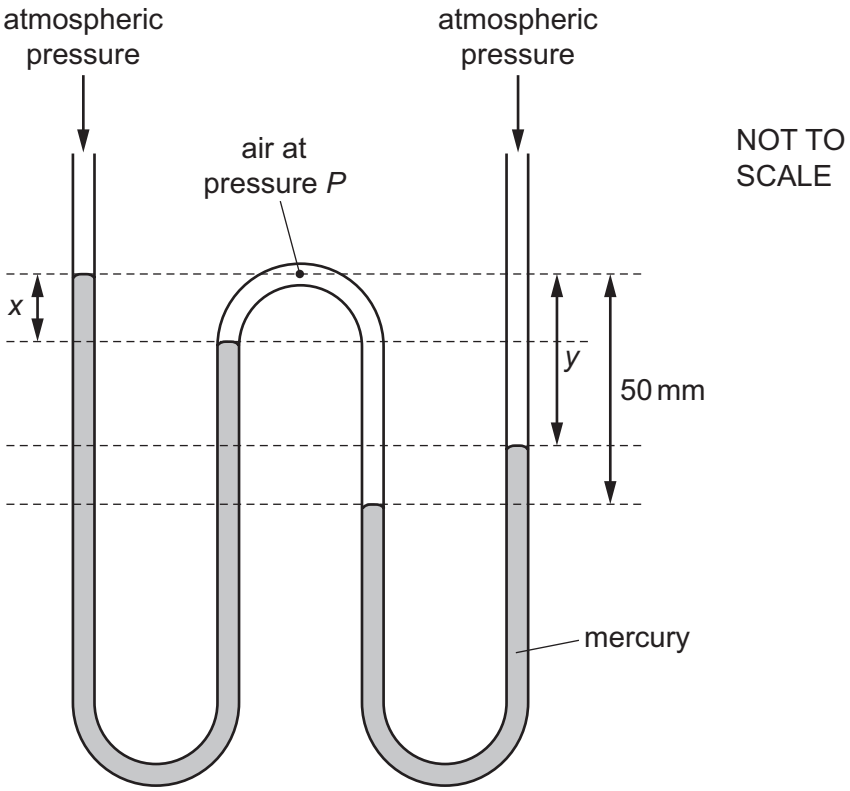
21 A W-shaped tube contains two amounts of mercury, each open to the atmosphere. Air at pressure *P* is trapped in between them. The diagram shows two vertical distances *x* and *y*.



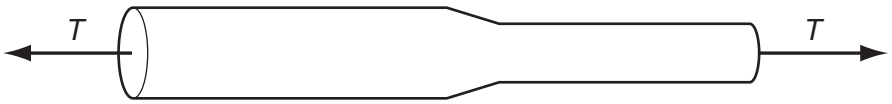
Atmospheric pressure is equal to the pressure that would be exerted by a column of mercury of height 760 mm. The pressure *P* is expressed in this way.

Which values of *x*, *y* and *P* are possible?

	x / mm	*y* / mm	*P* / mm of mercury
A	20	20	780
B	20	30	780
C	30	20	810
D	30	30	790

22 A steel bar of circular cross-section is under tension *T*, as shown.

The diameter of the wide portion is double the diameter of the narrow portion.



What is the value of $\frac{\text{stress in the wide portion}}{\text{stress in the narrow portion}}$?

A 0.25 **B** 0.50 **C** 2.0 **D** 4.0