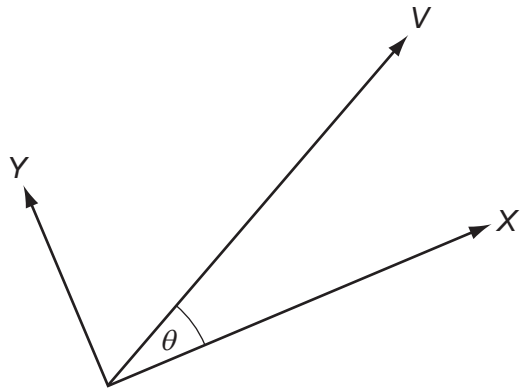
6 A vector quantity V is resolved into two perpendicular components X and Y. The angle between V and component X is θ.



The angle between component X and the vector V is increased from 0° to 90°.

How do the magnitudes of X and Y change as the angle θ is increased in this way?

	X	Y
A	increase	increase
B	increase	decrease
C	decrease	increase
D	decrease	decrease

7 The product of pressure and volume has the same SI base units as

A energy.

B force.

C $\frac{\text{force}}{\text{area}}$.

D $\frac{\text{force}}{\text{length}}$.

Space for working