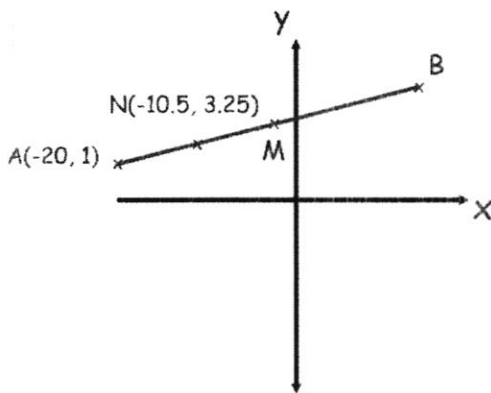


24th August



Corbettmaths



M is the midpoint of AB
N is the midpoint of AM

Find the coordinates of the point B

$$M (-1, 5.5)$$

$$\underline{B (18, 10)}$$

Find the length of AB.

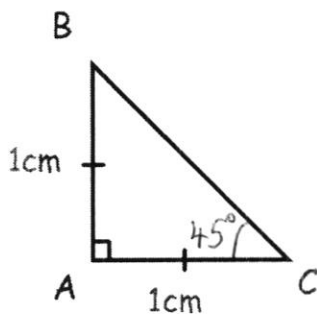
$$AB = \sqrt{38^2 + 9^2} = \sqrt{1525}$$

$$= \underline{39.05}$$

The 2 x 2 matrix I is the identity matrix.

Write down the 2 x 2 matrix I

$$\underline{I = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}}$$

Show that $\sin 45^\circ = \frac{\sqrt{2}}{2}$

$$BC = \sqrt{1^2 + 1^2} = \sqrt{2}$$

$$\sin 45^\circ = \frac{AB}{BC} = \frac{1}{\sqrt{2}} = \underline{\frac{\sqrt{2}}{2}}$$

A curve has equation $y = x^2 + 4x - 5$

Work out the equation of the tangent to
the curve $y = x^2 + 4x - 5$
at the point (2, 7)

$$\frac{dy}{dx} = 2x + 4$$

$$x = 2 \Rightarrow \frac{dy}{dx} = 8$$

$$y - 7 = 8(x - 2)$$

$$\underline{y = 8x - 9}$$