

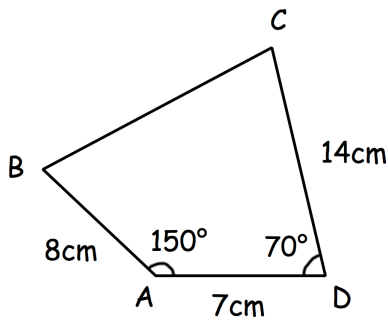


Solve the simultaneous equations

$$\begin{aligned}x &= 3y + 6 \\ 3xy &= 24 - x\end{aligned}$$

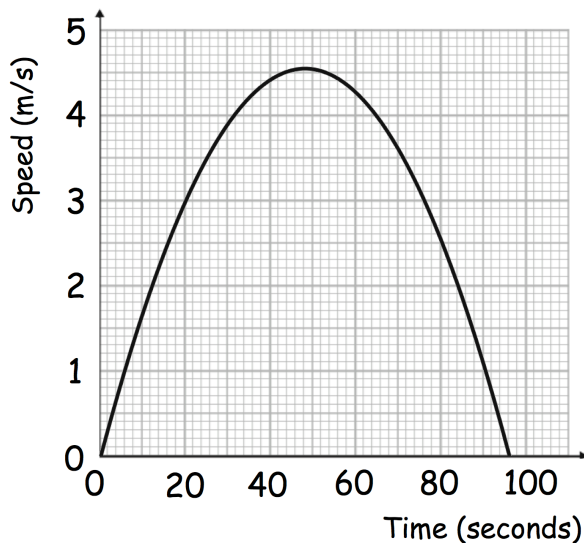
Write  $x^2 + 8x + 17$  in the form  $(x + a)^2 + b$

Find the coordinates of the turning point of  $y = x^2 + 8x + 17$



Calculate the length BC.

Below is the speed-time graph for the journey between two stops on a miniature locomotive



Work out an estimate of the acceleration of the locomotive at 20 seconds.

Work out an estimate for the distance travelled by the locomotive during the journey.