



C has coordinates $(-6, 2)$
D has coordinates $(-2, -6)$
E has coordinates $(1, 3)$

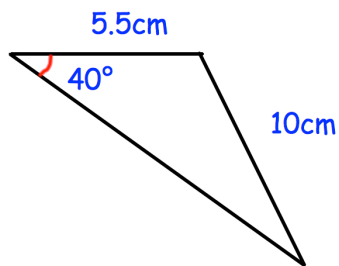
Find the equation of the line perpendicular to CD and passing through E.

Give your answer in the form $ax + by + c = 0$, where a, b and c are integers.

The speed limit on a road is 50km/h

Driving at a constant speed, it took Sam 60 seconds, correct to the nearest 5 seconds, to drive along a section of the road that is 780m long, correct to 2 significant figures.

Could Sam have broken the speed limit while driving along the section of road?



Calculate the area of the triangle

Find the coordinates of the points where the line $x + 5y = 37$ and the curve $y = x^2 + x + 2$ meet.

Find the maximum value of

$$\frac{1}{x^2 + 8x + 20}$$