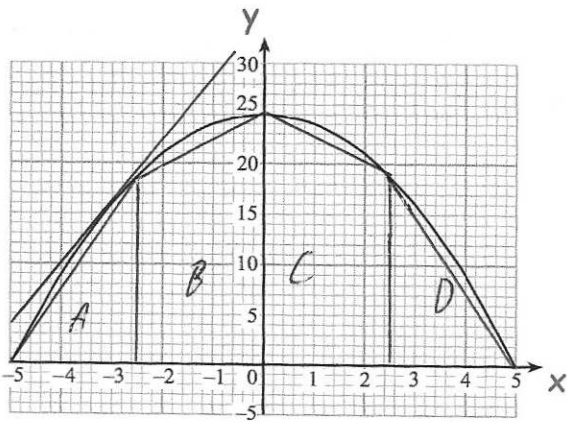


13th December



Corbettmaths



Calculate an estimate of the gradient of the curve at the $x = -3$

$$\begin{matrix} (-5, 4) & (-2, 22.5) \\ x_1, y_1 & x_2, y_2 \end{matrix}$$

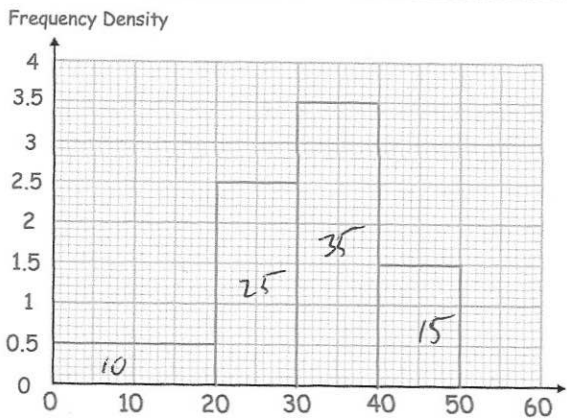
$$\frac{22.5 - 4}{-2 - (-5)} = \frac{18.5}{3} = 6.1\bar{6}$$

Area of A : $\frac{1}{2} \times 2.5 \times 19$
 & D = 23.75

Area of B = $\frac{1}{2} (19 + 25) \times 2.5$
 & C = 55

Find an estimate of the area between the curve and the x-axis between $x = -5$ and $x = 5$

$$23.75 + 23.75 + 55 + 55 = 157.5$$



$10 + 25 + 35 + 15 = 85$ Speed, mph

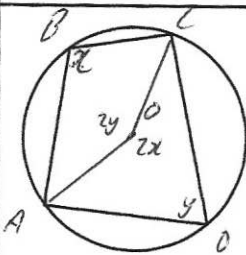
Find an estimate of the median

47.5th value

$$30 + \frac{7.5}{35} \times 10 = 32.14 \text{ mph}$$

Two cars are selected at random. Calculate the probability that both cars have a speed greater than 40mph

$$\frac{15}{85} \times \frac{14}{84} = \frac{1}{34}$$



Let $\angle ABC = x$
 & $\angle ADC = y$

$\angle AOC = 2y$
 $\angle AOD = 2x$

Angle at centre is twice the angle at the circumference

Prove the opposite angles in a cyclic quadrilateral add to 180°

$$\therefore 2x + 2y = 360^\circ$$

$$\therefore x + y = 180^\circ$$

QED