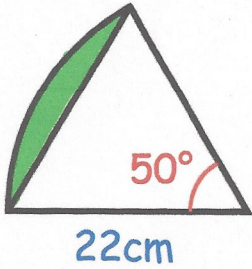


31st October



Corbettmaths



$$\Delta \quad \frac{1}{2} \times 22 \times 22 \times \sin 50$$

$$185.3827552 \text{ cm}^2$$

Sector

$$\frac{50}{360} \times \pi \times 22^2 =$$

$$211.1848395$$

Calculate the area of the segment

$$25.8 \text{ cm}^2$$

Work out the nth term for the sequence

1, 5, 15, 31, 53 ...

$$\begin{array}{cccc} 4 & 10 & 16 & 22 \\ 6 & 6 & 6 & \end{array}$$

$$an^2 + bn + c$$

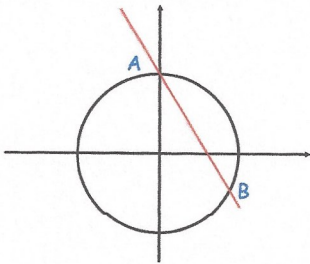
$$a = 3 \quad b = -5$$

$$c = 3$$

$$3n^2 - 5n + 3$$

Find the 10th term in the sequence

$$253$$



$$r = 10$$

Find the coordinates of points A and B

$$x(65x - 160) = 0$$

$$x = 0 \quad \text{or} \quad x = \frac{160}{65} = \frac{32}{13}$$

$$y = 10 \quad y = -\frac{126}{13}$$

$$A(0, 10) \quad \text{and} \quad B\left(\frac{32}{13}, -\frac{126}{13}\right)$$

The circle $x^2 + y^2 = 100$ and the line $8x + y - 10 = 0$ meet at the points A and B

$$y = 10 - 8x$$

$$x^2 + (10 - 8x)^2 = 100$$

$$x^2 + 100 - 160x + 64x^2 = 100$$

$$65x^2 - 160x = 0$$

Find the length of AB.

$$AB = \sqrt{\left(\frac{32}{13} - 0\right)^2 + \left(-\frac{126}{13} - 10\right)^2}$$

$$AB = \sqrt{\frac{1024}{169} + 387.786}$$

$$AB = \sqrt{\frac{3120}{13}} = \frac{32\sqrt{65}}{13} = 19.8456$$

Shown is $y = \cos(x)$

On the same grid, sketch

$$y = \cos(x) + 2$$

