



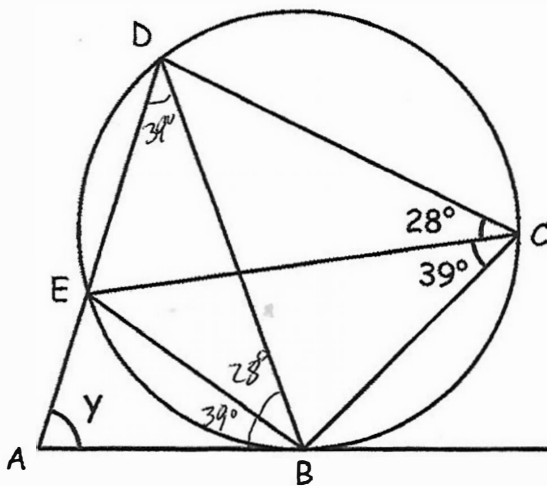
Factorise fully

$$3x^2 - 48$$

$$3(x^2 - 16)$$

$$3(x-4)(x+4)$$

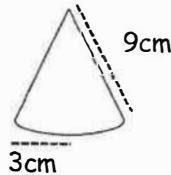
AB is a tangent to a circle.
AED is a straight line.



Work out the size of angle y.

$$39 + 39 + 28 = 106^\circ$$

$$180^\circ - 106^\circ = 74^\circ$$



The surface area of the sphere is equal to the sum the surface areas of the cone and cube.

Find y.

Give your answer to 1 decimal place.

$$\text{Cube: } 6 \times 64 \text{ cm}^2 = 384 \text{ cm}^2$$

$$\text{Cone: } (\pi \times 3^2) + (\pi \times 3 \times 9) = 36\pi \text{ cm}^2$$

$$\text{Sphere: } 4\pi x^2 = 36\pi + 384$$

$$x^2 = 39.5577 \dots$$

$$x = 6.3 \text{ cm to 1dp.}$$

Height (m)	Frequency
$0 < h \leq 2$	1
$2 < h \leq 4$	11
$4 < h \leq 6$	5
$6 < h \leq 8$	3

20

Two trees are selected at random.

What is the probability they are both over two metres?

$$\frac{19}{20} \times \frac{18}{19} = \frac{9}{10}$$

$$= 0.9$$