

2nd July

Higher 5-a-day



Corbettmaths

Use the quadratic formula to solve $3x^2 + 2x - 7 = 0$

$$a = 3 \quad b = 2 \quad c = -7$$

Give your solutions correct to 2 significant figures.

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\frac{-2 \pm \sqrt{4 - (-84)}}{6}$$

$$\frac{-2 \pm \sqrt{88}}{6}$$

$$x = 1.2$$

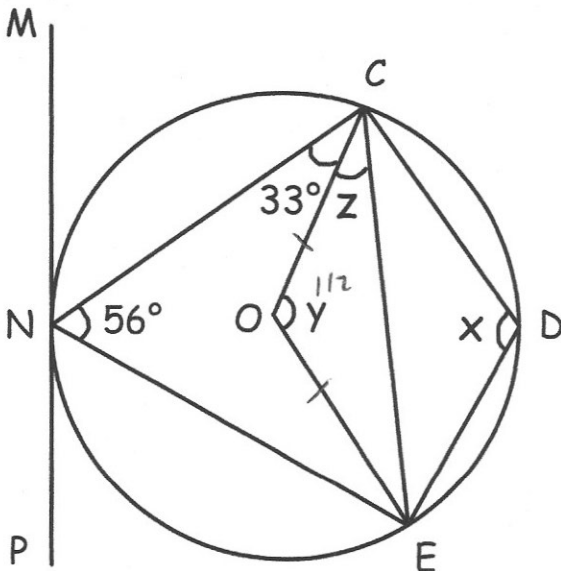
or

$$x = -1.9$$

A block of ice loses 10% of its volume each minute.

What percentage will be left after 5 minutes?

$$100 \times 0.9^5 = 59.05\%$$



C, D, E and N are points on a circle with centre O.

MNP is a tangent to the circle.

Angle CNE is 56° and angle OCN is 33°

Work out angle CDE, labelled x.

$$180 - 56 = 124^\circ$$

Work out angle COE, labelled y.

$$56 \times 2 = 112^\circ$$

Work out angle OCE, labelled z.

$$180 - 112 = 68$$

$$68 \div 2 = 34^\circ$$