

## Introduction to Circles

### Starter

1. (Review of last lesson)

Find the equation of the line passing through the points  $(-2, 4)$  and  $(3, -21)$ .

**Working:** Label the points:  $(-2, 4)$   $(3, -21)$

$$\text{Gradient} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-21 - 4}{3 - -2} = \frac{-25}{5} = -5$$

Substitute the gradient into  $y = mx + c$ :

Substitute  $(-2, 4)$  into  $y = -5x + c$ :

$$y = -5x + c$$

$$4 = (-5) \times (-2) + c$$

$$4 = 10 + c$$

$$c = -6$$

The equation of the line is  $y = -5x - 6$

Video: [Parts of the circle](#)

[Solutions to Starter and E.g.s](#)

### Exercise

1. p71 Ex 16.1 Qu 1-2, 4-6

2. Find at least 3 circular objects at home (e.g. tin of soup, bicycle wheel). For each object:

- using a ruler, measure its diameter.
- using a piece of string, measure its circumference.
- record your data in a table

Object	Diameter	Circumference

- (d) Calculate the value  $\frac{\text{circumference}}{\text{diameter}}$  for each of your objects. What do you notice?

[Textbook answers \(only available during a lockdown\)](#)