

**21**

A bag contains 25 discs.

11 are red, 9 are blue and 5 are yellow.

Ashley picks three of the discs at random without replacement.

Ashley's first disc is red.

Work out the probability that all three discs are different colours.

**[3 marks]**

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Answer \_\_\_\_\_



22

The metal used to make a sphere costs £4320

The metal costs £3.60 per gram.

Each cubic centimetre of metal has a mass of 17.3 grams.

Work out the radius,  $r$ , of the sphere.

$$\text{Volume of a sphere} = \frac{4}{3}\pi r^3$$

[4 marks]

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$r =$  \_\_\_\_\_ cm

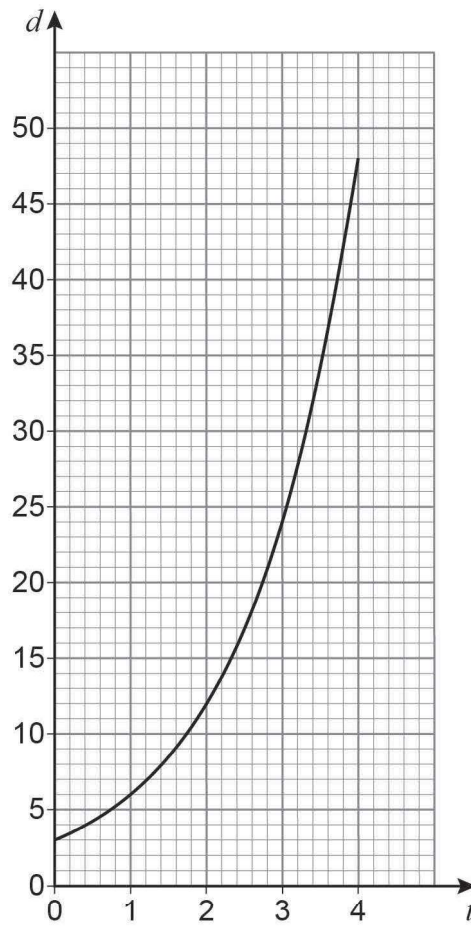
Turn over for the next question



23

The distance of a particle from a point is  $d$  metres after  $t$  seconds.

$$d = a \times b^t \quad \text{where } a \text{ and } b \text{ are constants}$$



Work out the values of  $a$  and  $b$ .

[3 marks]

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$a =$  \_\_\_\_\_  $b =$  \_\_\_\_\_



A straight line has the equation  $y = 3x - 2$

**[5 marks]**

Answer ( \_\_\_\_\_ , \_\_\_\_\_ ) and ( \_\_\_\_\_ , \_\_\_\_\_ )

$$\frac{\quad}{8}$$

