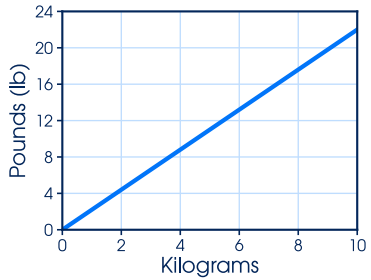
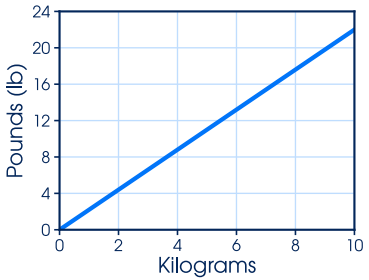
GCSE HIGHER · REVISION MAT 4

Real-life graphs

1 Use the graph to convert 5 kg to pounds (lb).



2 Use the graph to convert 15 lb to kg.



3 A distance–time graph is horizontal for 30 minutes.

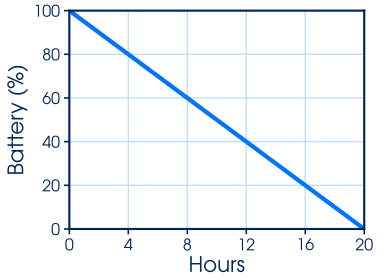
What does this show?

4 Taxi A: £2.50 plus £1.50 per mile.

Taxi B: £1.80 per mile.

For which whole-mile journeys is B cheaper?

5 The graph shows a phone's battery level.



Show it falls by 5% per hour.

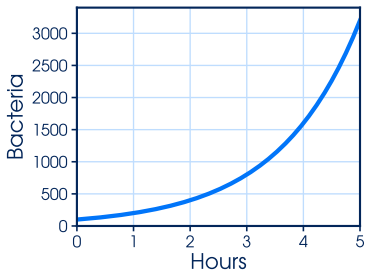
When will 30% be left?

6 A printer charges £20 to set up plus 40p per copy.

A shop charges 50p per copy.

Which is cheaper for 150 copies? Show working.

7 A colony of 100 bacteria doubles every hour.



Show there are 800 after 3 hours.

Explain why the graph is not a straight line.

8 A colony of 100 bacteria doubles every hour.

After how many whole hours are there first more than 10 000?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Real-life graphs

1 11 lb

2 About 6.8 kg

3 The person is not moving (stopped) for 30 minutes.

4 $1.8m < 2.5 + 1.5m$

$0.3m < 2.5 \Rightarrow m < 8.3$

Journeys of up to 8 miles

5 $\frac{100}{20}$ = 5% per hour

After 14 hours

6 Printer: £20 + £60 = £80

Shop: £75

The shop is cheaper.

7 $100 \times 2^3 = 800$

It is multiplied by 2 each hour, not increased by a fixed amount.

8 $2^t > 100$

$2^6 = 64$, $2^7 = 128$

7 hours

Mr&Mrs MATHS