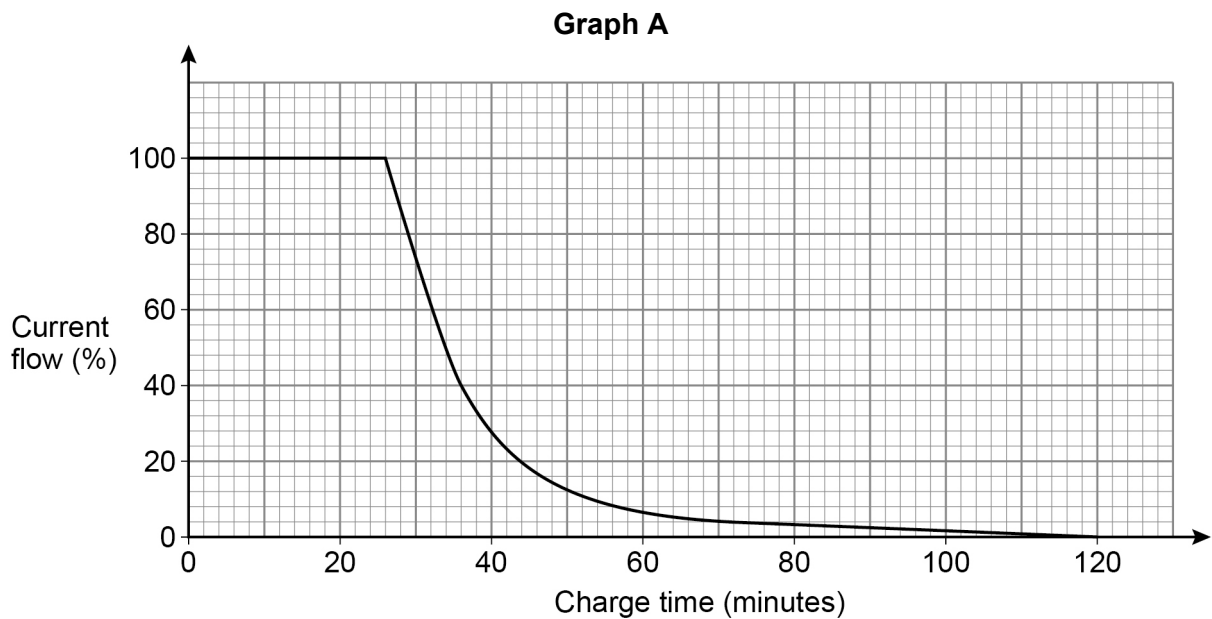
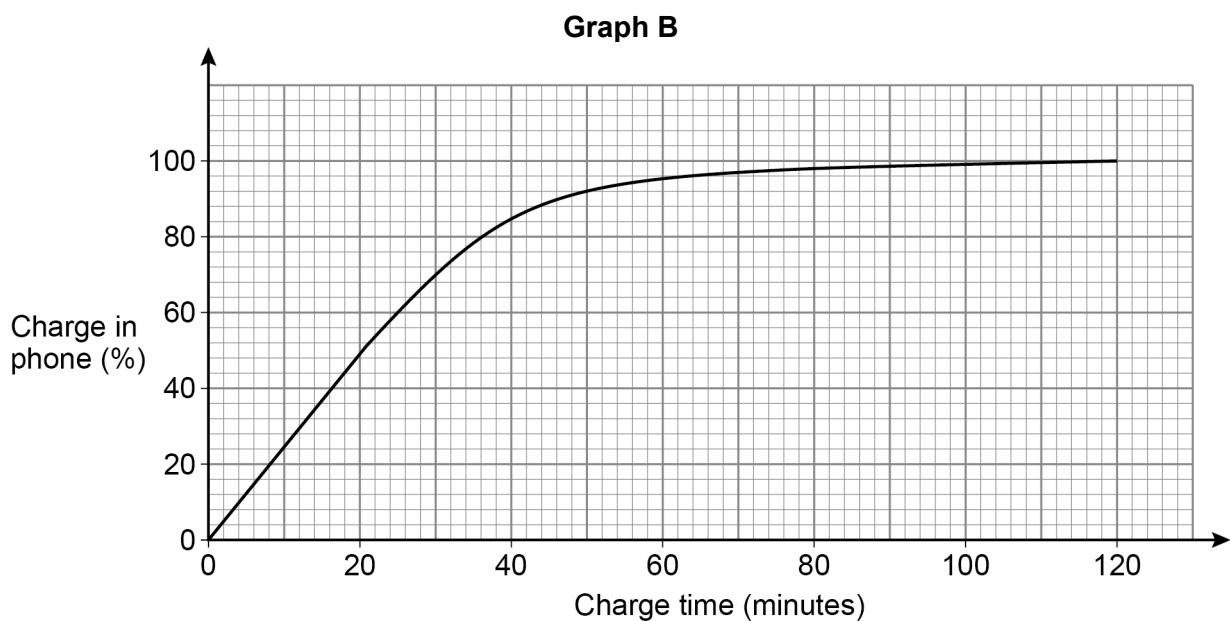


- 1 A mobile phone takes 2 hours to charge from empty.
- When the phone is being charged, the current flow into the phone
- starts at full current flow (100%)
 - continues at full current flow for a period of time
 - gradually decreases until the phone is fully charged.

This is shown on **Graph A** below.



Graph B shows the percentage charge in the phone when charging from empty.



Megan's phone is empty of charge.

She starts to charge her phone at 10.00 am

- 1 (a)** Using **Graph A**,
estimate the time when the current flow starts to decrease.

[2 marks]

Answer _____ am

- 1 (b)** Using **Graph A and Graph B**,
estimate the percentage charge in the phone when the current flow is 40%

[1 mark]

Answer _____ %

- 1 (c)** Using **Graph B**,
estimate the rate of increase in the percentage charge when the phone has 90% charge.

[2 marks]

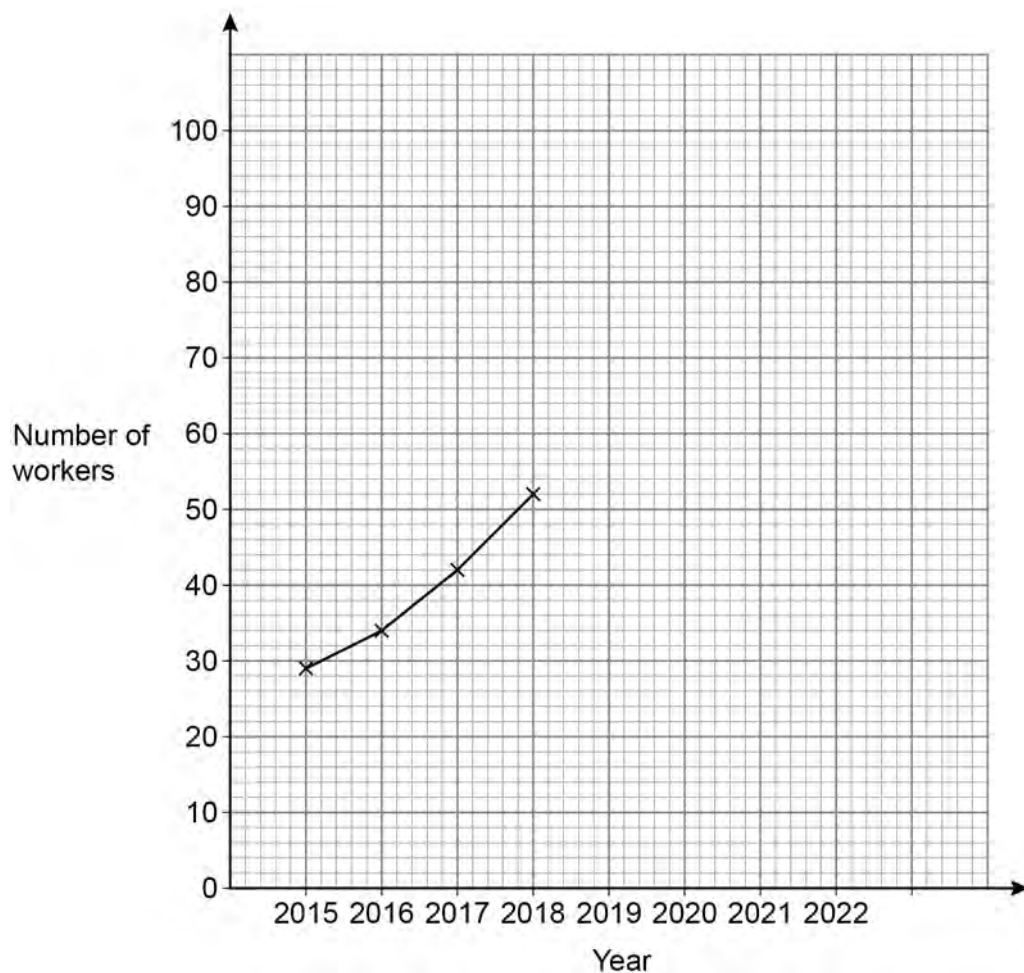
Answer _____ percent per minute

- 2 The table shows the number of workers at a company in different years.

Year	2015	2016	2017	2018	2019	2020	2021	2022
Number of workers	29	34	42	52	62	70	76	80

A time-series graph is drawn to represent the data.

The first four points have been plotted.



- 2 (a) Complete the graph. [2 marks]
- 2 (b) Estimate the number of workers at the company in 2023 [1 mark]

Answer _____