

2 Use mathematics and statistics

- In these questions you will be told what to calculate.

Example:

Rena wants to ring her friend in Perth, Australia. They are four hours behind New Zealand. If Rena rings them at 19:42 New Zealand time, what is the time in Perth?

5.42 pm

3.42 am

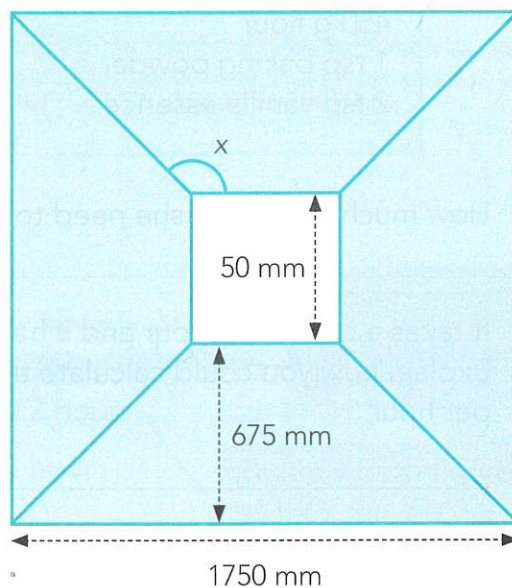
3.42 pm

13:42

19:42 is 7.42 pm in 12-hour time. Four hours earlier it is 3.42 pm.

Answer the following questions.

- 1 a Four tables with trapezium-shaped tops are arranged to make a square.



Calculate the size of angle x . _____

- b Which calculation would give you the total shaded area?

$1750^2 - 50^2$

$1750^2 + 50^2$

$4 \times 1750 \times 675$

$4 \times \frac{1750 \times 675}{2}$

- 2 Fabian's monthly activity goal is to complete 155 000 steps. If the month is 31 days long, how many steps on average does he need to take each day?

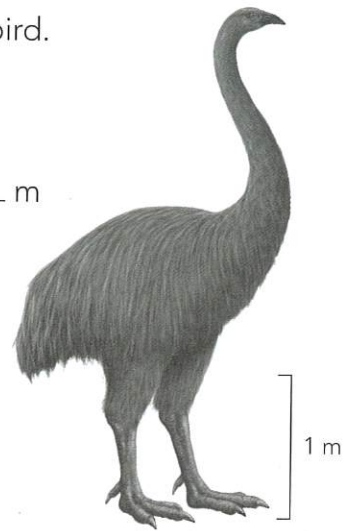
_____ steps



- 3 a The giant moa is an extinct New Zealand flightless bird.

Estimate the height of this moa.

_____ m



- b It is believed that once there were 2.5 million of the giant moa. Write this number using digits only.

- c Each egg laid by a female moa has a mass about 2% of her body mass.

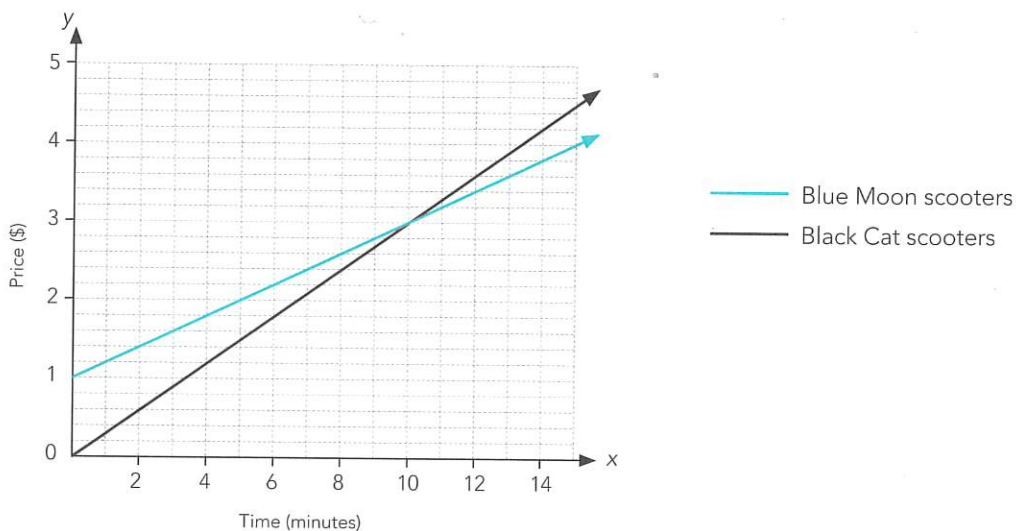
If the mass of a female moa was 230 kg, estimate the mass of one egg.

_____ kg

- d It is thought that moa could travel at 112 km/hour. Assuming it could keep this pace up, how long (to the nearest hour) would it have taken to run 84 km, the distance from Ashburton to Christchurch?

_____ minutes

- 4 The prices charged for the use of electric scooters by two companies are graphed below.



- a How much would a 14-minute trip with Blue Moon scooters cost you?

\$ _____

- b What is the cost per minute to hire a scooter from Black Cat scooters?

_____ cents