

Estimation

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **25**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** Work out an estimate for the value of $\frac{8.21 \times 39.6}{0.49}$

.....
(3)

(Total for Question 1 is 3 marks)

- 2** Work out an estimate for the value of $\frac{\sqrt{99.2}}{2.03^2}$

.....
(2)

(Total for Question 2 is 2 marks)

- 3 Use $\pi \approx 3$ to estimate the circumference of a circle with diameter 19.7 cm.

..... cm

(2)

(Total for Question 3 is 2 marks)

- 4 A car travels 297 miles on 11.2 gallons of petrol.
Estimate the number of miles the car travels on 1 gallon.

..... miles

(2)

(Total for Question 4 is 2 marks)

- 5 Pete buys 41 packets of crisps at 48p each.
He estimates the total cost is £30
Is Pete's estimate sensible?
You must show how you get your answer.

.....

(2)

(Total for Question 5 is 2 marks)

- 6 Estimate the number of hours in a year.
You must show your working.

.....
(2)

(Total for Question 6 is 2 marks)

- 7 Laura is tiling a floor with an area of 19.6 m^2 .
She needs 25 tiles for each m^2 .
Each tile costs 98p.

- (a) Work out an estimate for the total cost of the tiles.
You must show your working.

£
(3)

- (b) Is your answer to (a) an underestimate or an overestimate?
Give a reason for your answer.

.....
.....
(1)

(Total for Question 7 is 4 marks)

- 8** A ferry sails across a lake for 41 minutes.
Its average speed is 31.8 km/h.

- (a) Work out an estimate for the distance the ferry sails.
You must show your working.

..... km
(3)

- (b) Is your answer to part (a) an underestimate or an overestimate?
Give a reason for your answer.

(1)

(Total for Question 8 is 4 marks)

- 9 Amir has £300 to spend on plants for his garden.
He buys 38 plants.
Each plant costs £5.90

- (a) Work out an estimate for the amount of money Amir has left.
You must show all your working.

£
(3)

- (b) Is your answer to part (a) an underestimate or an overestimate?
Give a reason for your answer.

.....
.....
(1)

(Total for Question 9 is 4 marks)

.....