

Estimating

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NAME _____

DATE _____

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- 1 Estimate the value of 73.3×8.3 . 📝 NON-CALCULATOR 2 MARKS

Round each number to 1 significant figure.

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- 2 Three warehouses hold these numbers of boxes. 📝 NON-CALCULATOR 3 MARKS

2, 347, 3, 180, 5, 946

- (a) Work out an estimate of the total, by rounding each number to the nearest 1000.
(b) Is your estimate bigger or smaller than the exact total?

Give a reason for your answer.

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- 3 Tomas tries to work out $\frac{87.87+69.63}{14.07}$. 📝 NON-CALCULATOR 3 MARKS

He writes down the answer 92.82.

By rounding each number to the nearest 10, show that his answer is incorrect.

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- 4 Estimate the value of $\frac{76.8 \times 64.8}{5.1}$. 📝 NON-CALCULATOR 3 MARKS

Round each number to 1 significant figure.

5 Work out an estimate for the value of $\sqrt{28.3 \times 29.5}$.

 NON-CALCULATOR 3 MARKS

Round each number to 1 significant figure.

6 A school buys 54 calculators costing £6.20 each.

 NON-CALCULATOR 3 MARKS

(a) Work out an estimate for the total cost. Round each number to 1 significant figure.

(b) Is your estimate an over-estimate or an under-estimate of the true cost? Give a reason for your answer.

7 A stadium holds 3106 people.

 NON-CALCULATOR 3 MARKS

Find an estimate of 41% of 3106.

You must show your working.

8 A roll of ribbon is 71.19 m long.

 NON-CALCULATOR 2 MARKS

It is to be cut into pieces that are each 0.69 m long.

Calculate an estimate of how many pieces can be cut from the roll.

You must show your working.

9 Nadia uses a calculator to work out 63.6×24 .

 NON-CALCULATOR 3 MARKS

She writes down the answer 152640.

(a) Calculate an estimate of 63.6×24 by rounding each number to 1 significant figure.

(b) Explain how your estimate shows that Nadia's answer is wrong.

10 An office buys 45 printers for a total of £1953.00.

 NON-CALCULATOR 2 MARKS

Calculate an estimate of the cost of one printer.

Round each number to 1 significant figure.

You must show your working.

1	560	2	(a) 11000 (b) Smaller — the exact total is 11,473, so the estimate is out by 473.
3	Estimate $\frac{90+70}{10} = 16$; Tomas wrote 92.82, which is far from 16, so the answer is incorrect.	4	960
5	30	6	(a) £300 (b) An under-estimate
7	1200 people	8	100
9	(a) 1200 (b) The estimate is about 1200, but Nadia wrote 152640, which is far bigger than that.	10	£40