

Best Buys

Solutions

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

Each question is shown in grey, followed by the working, one step per line. The final answer is in a box. *Marks* shows how the marks are usually given in the exam, and **Tip** points out a common mistake.

1 (3 marks)

Dishwasher tablets are sold in boxes of three different sizes.

30 tablets for £4.50

50 tablets for £7.00

80 tablets for £11.60

Which box gives the best value for money?

You must show how you get your answer.

Find the cost of 1 tablet in each box.

Box of 30: $450 \div 30 = 15\text{p}$

Box of 50: $700 \div 50 = 14\text{p}$

Box of 80: $1160 \div 80 = 14.5\text{p}$

The box of 50 has the lowest cost per tablet, so it is the best value.

Answer: Box of 50 (14p per tablet)

Tip: The biggest box is not always the best value. Here the box of 80 costs more per tablet than the box of 50.

Marks: 1 mark for one cost per tablet. 1 mark for all three. 1 mark for the box of 50 with correct values.

2 (3 marks)

Dervla is buying white paint.

The same paint is sold in three sizes of tin.

1 litre £9.50	2.5 litres £21.00	5 litres £43.50
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Which size of tin should Dervla buy to get the best value for money?

You must show how you get your answer.

Find the cost of 1 litre for each tin.

1 litre tin: £9.50 per litre

2.5 litre tin: $21.00 \div 2.5 = £8.40$ per litre

5 litre tin: $43.50 \div 5 = £8.70$ per litre

The 2.5 litre tin has the lowest cost per litre, so it is the best value.

Answer: The 2.5 litre tin (£8.40 per litre)

Tip: Divide the price by the number of litres. For the 2.5 litre tin, $21 \div 2.5$ is not the same as $21 \div 2$.

Marks: 1 mark for one cost per litre. 1 mark for all three. 1 mark for the 2.5 litre tin with correct values.

3 (4 marks)

Two shops sell the same porridge oats.

Shop A 750 g box Normal price £3.60 Now 15% off	Shop B 1 kg box Normal price £5.20 Now £1 off
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Which box of oats is the better value for money?

You must show your working.

Shop A: $15\% \text{ of } £3.60 = £0.54$

So the 750 g box costs $3.60 - 0.54 = \text{£}3.06$

$306 \div 7.5 = 40.8\text{p}$ per 100 g

Shop B: $5.20 - 1 = \text{£}4.20$ for 1 kg = 1000 g

$420 \div 10 = 42\text{p}$ per 100 g

40.8p is less than 42p, so Shop A is better value.

Answer: Shop A (40.8p per 100 g compared with 42p)

Tip: The boxes are different sizes, so compare the price of the same amount (e.g. 100 g) after taking off each discount.

Marks: 1 mark for £3.06. 1 mark for £4.20. 1 mark for comparable values, e.g. price per 100 g. 1 mark for Shop A with correct values.

4 (4 marks)

Two garden centres sell the same bedding plants.

Centre A	Centre B
90p per plant Buy 5, get 1 free	Tray of 12 plants £12.60 Second tray half price

Hassan needs 24 plants.

Which garden centre is cheaper for 24 plants?

You must show how you get your answer.

Centre A: for every 6 plants you pay for 5.

$24 \div 6 = 4$, so Hassan pays for $4 \times 5 = 20$ plants.

$20 \times 0.90 = \text{£}18.00$

Centre B: 24 plants is 2 trays.

$12.60 + \frac{1}{2} \times 12.60 = 12.60 + 6.30 = \text{£}18.90$

£18.00 is less than £18.90, so Centre A is cheaper (by 90p).

Answer: Centre A (£18.00 compared with £18.90)

Tip: “Buy 5, get 1 free” means you get 6 plants for the price of 5. It does not mean you pay for 4 out of every 5.

Marks: 1 mark for paying for 20 plants. 1 mark for £18.00. 1 mark for £18.90. 1 mark for Centre A with both totals.

5 (3 marks)

A café buys paper cups.

A small box of 250 cups costs £13.75

A large box of 1000 cups costs £48

The café uses 3000 cups each month.

Work out how much money the café saves each month by buying large boxes instead of small boxes.

Small boxes: $3000 \div 250 = 12$ boxes

$12 \times 13.75 = £165$

Large boxes: $3000 \div 1000 = 3$ boxes

$3 \times 48 = £144$

Saving = $165 - 144 = £21$

Answer: £21

Marks: 1 mark for 12 boxes or 3 boxes. 1 mark for £165 or £144. 1 mark for £21.

6 (3 marks)

Two companies hire out cars.

Company A £35 per day

Company B £90 booking fee plus £18 per day
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Kiera wants to hire a car for 5 days.

Which company is cheaper for Kiera?

You must show how you get your answer.

Company A: $5 \times 35 = £175$

Company B: $5 \times 18 = £90$

$90 + 90 = £180$

£175 is less than £180, so Company A is cheaper (by £5).

Answer: Company A (£175 compared with £180)

Tip: Company B's £90 is paid once, not every day. Add it on once at the end.

Marks: 1 mark for £175 or £180. 1 mark for both. 1 mark for Company A with correct values.
