



EXAM PAPERS PRACTICE

GCSE OCR Math J560

Best Buy

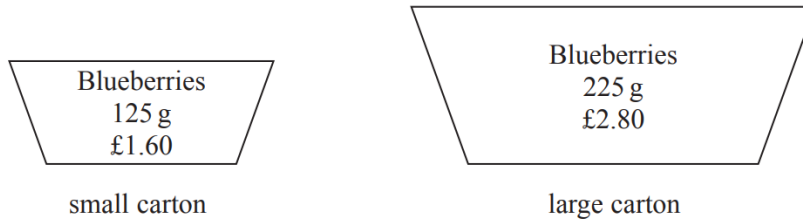
Answers

*"We will help you to
achieve A Star "*



Answer 1

Blueberries are sold in small cartons and in large cartons.



There are 125 g of blueberries in a small carton.
Each small carton costs £1.60

There are 225 g of blueberries in a large carton.
Each large carton costs £2.80

Which size of carton is the better value for money?
You must show your working.

FIND NUMBER OF g PER £ FOR EACH.

$$\text{SMALL: } \frac{125 \text{ g}}{£1.60} = 78.125 \text{ g/£}$$

$$\text{LARGE: } \frac{225 \text{ g}}{£2.80} = 80.35... \text{ g/£}$$

SO LARGE CARTON IS BETTER VALUE
BECAUSE $80 > 78$.



Answer 2

Plants are sold in three different sizes of tray.

A small tray of 30 plants costs £6.50

A medium tray of 40 plants costs £8.95

A large tray of 50 plants costs £10.99

Kaz wants to buy the tray of plants that is the best value for money.

Which size tray of plants should she buy?

You must show all your working.

FIND THE COST PER PLANT FOR EACH TRAY

$$\text{SMALL: } \frac{6.50}{30} = \text{£}0.216\dots$$

$$\text{MEDIUM: } \frac{8.95}{40} = \text{£}0.22375$$

$$\text{LARGE: } \frac{10.99}{50} = \text{£}0.2198$$

SMALL TRAY AS THIS IS THE CHEAPEST PER PLANT.



Answer 3

A shop sells bags of crisps in different size packs.

There are

- 18 bags of crisps in a small pack
- 20 bags of crisps in a medium pack
- 26 bags of crisps in a large pack



Which size pack is the best value for money?
You must show all your working.

FOR EACH PACK FIND THE COST OF ONE BAG OF CRISPS.

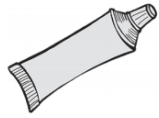
$$\begin{array}{l|l|l} \textcircled{18} & \textcircled{20} & \textcircled{26} \\ \text{COST} = \frac{400\text{p}}{18} & \text{COST} = \frac{499}{20} & \text{COST} = \frac{600}{26} \\ = \underline{\underline{22.22}}\text{p} & = \underline{\underline{24.95}}\text{p} & = \underline{\underline{23.0769}}\dots\text{p} \end{array}$$

18 PACK IS THE BEST VALUE FOR MONEY

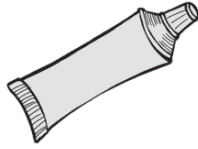


Answer 4

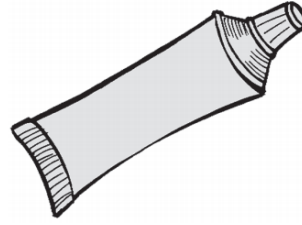
Toothpaste is sold in three different sizes of tube.



50ml



75ml



125ml

A 50ml tube costs £1.09

A 75ml tube costs £1.68

A 125ml tube costs £2.69

Which tube of toothpaste is the best value for money?
You must show all your working.

FIND COST PER ML FOR EACH

$$\text{SMALL: } \text{CPM} = \frac{109\text{p}}{50\text{ml}} = 2.18\text{ p/ml}$$

$$\text{MEDIUM: } \text{CPM} = \frac{168\text{p}}{75\text{ml}} = 2.24\text{ p/ml}$$

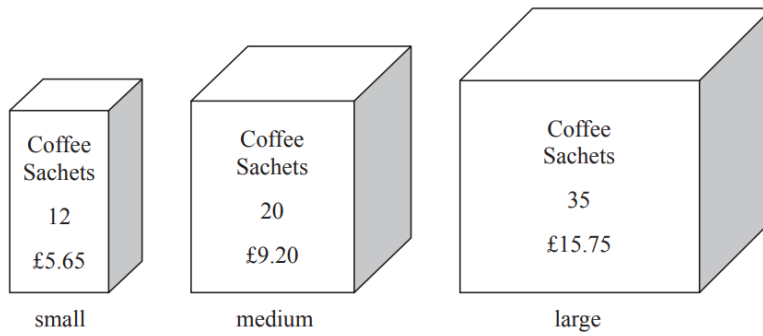
$$\text{LARGE: } \text{CPM} = \frac{269\text{p}}{125\text{ml}} = 2.152\text{ p/ml}$$

LARGE (125ml) TUBE IS BEST VALUE FOR MONEY



Answer 5

Coffee sachets are sold in three different sizes of box.



A small box has 12 coffee sachets and costs £5.65
A medium box has 20 coffee sachets and costs £9.20
A large box has 35 coffee sachets and costs £15.75

Work out which size of box gives the best value for money.
You must show all your working.

FIND COST PER SACHET FOR EACH BOX:

$$\text{SMALL: CPS} = \frac{5.65}{12} = \pounds 0.47$$

$$\text{MEDIUM: CPS} = \frac{9.20}{20} = \pounds 0.46$$

$$\text{LARGE: CPS} = \frac{15.75}{35} = \pounds 0.45$$

LARGE BOX IS BEST VALUE.



Answer 6

Henry is thinking about having a water meter.

These are the two ways he can pay for the water he uses.

Water Meter

A charge of £28.20 per year

£0.9122 plus

91.22p for every cubic metre of water used

1 cubic metre = 1000 litres

No Water Meter

A charge of £107 per year

Henry uses an average of 180 litres of water each day.

Henry wants to pay as little as possible for the water he uses.

Should Henry have a water meter?

$$\begin{aligned}\text{TOTAL USAGE PER YEAR} &= 180 \times 365 \\ &= 65700 \\ &= 65.7 \text{ m}^3\end{aligned}$$

WITHOUT METER:

$$\begin{aligned}\text{TOTAL COST PER YEAR} &= 28.20 + 0.9122 \times 65.7 \\ &= \pounds 88.13\end{aligned}$$

SINCE $\pounds 88.13 < \pounds 107$ HENRY
SHOULD HAVE A WATER METER.



Answer 7

Milk is sold in two sizes of bottle.



A 4 pint bottle of milk costs £1.18
A 6 pint bottle of milk costs £1.74

Which bottle of milk is the best value for money?
You must show all your working.

FIND COST PER PINT FOR EACH...

$$\begin{aligned} 4PT: \quad CPP &= \frac{118}{4} && \begin{array}{r} 29.5 \\ 4 \overline{)118.0} \end{array} \\ &= \underline{29.5p/pt} \end{aligned}$$

$$\begin{aligned} 6PT \quad CPP &= \frac{174}{6} && \begin{array}{r} 29 \\ 6 \overline{)174} \end{array} \\ &= \underline{29p/pt} \end{aligned}$$

6PT BOTTLE IS (SLIGHTLY) BETTER VALUE



Answer 8

Two shops, Mega Bathrooms and Bathroom Mart, each have a sale.

<p>Mega Bathrooms</p> <p>Sale</p> <p>60% off normal price then 15% off</p>
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<p>Bathroom Mart</p> <p>Sale</p> <p>$\frac{2}{3}$ off normal price</p>
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Sally wants to buy some bathroom units.
The units have a normal price of £1500

Sally wants to buy the units as cheaply as possible.

Which shop should she buy the units from?
You must show all your working.

MEGA BATHROOMS

$$\begin{aligned} \pounds 1500 : & \quad 10\% = \pounds 150 \\ & \quad 20\% = \pounds 300 \\ & \quad \times 3 \quad \left. \begin{array}{l} \pounds 900 \end{array} \right\} \times 3 \end{aligned}$$

$$60\% \text{ OFF: } 1500 - 900 = \pounds 600$$

$$\begin{aligned} \pounds 600 : & \quad 10\% = \pounds 60 \\ & \quad + \frac{5\%}{\pounds 30} = \pounds 90 \end{aligned}$$

$$\begin{aligned} 15\% \text{ OFF} & \quad 600 - 90 \\ & = \pounds 510 \end{aligned}$$

BATHROOM MART

$$\pounds 1500 : \quad \frac{2}{3} \times 1500 = \pounds 1000$$

$$\begin{aligned} \frac{2}{3} \text{ OFF: } & \quad 1500 - 1000 \\ & = \pounds 500 \end{aligned}$$

SALLY SHOULD BUY

FROM BATHROOM MART



Answer 9

Potatoes cost £9 for a 12.5 kg bag at a farm shop.

The same type of potatoes cost £1.83 for a 2.5 kg bag at a supermarket.

Where are the potatoes the better value, at the farm shop or at the supermarket?

You must show your working.

COST PER KG

$$\text{FARM SHOP: } \frac{9}{12.5} = £0.72/\text{kg}$$

$$\text{SUPERMARKET: } \frac{1.83}{2.5} = £0.732/\text{kg}$$

THE FARM SHOP IS BETTER VALUE