EXAM PAPERS PRACTICE

GCSE Edexcel Math
1MA1
Best Buy

Answers

"We will help you to achieve A Star "

Answer 1

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

SMALL: $\frac{6.50}{30} = £0.216...$

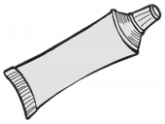
MEDIUM: $\frac{8.95}{40} = £0.22375$

LARGE: $\frac{10.99}{50} = £0.2198$

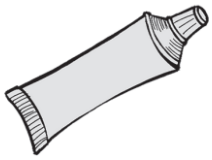
SMALL TRAY AS THIS IS THE CHEAPEST PER PLANT.

Answer 2

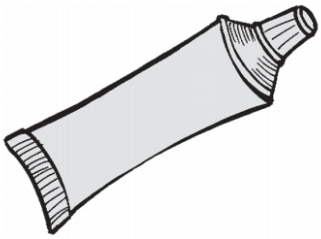
Toothpaste is sold in three different sizes of tube.



50 m*l*



75 m*l*



125 m*l*

A 50 m*l* tube costs £1.09
A 75 m*l* tube costs £1.68
A 125 m*l* 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

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

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

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

LARGE (125ml) TUBE IS BEST VALUE FOR MONEY

Answer 3

Blueberries are sold in small cartons and in large cartons.

small carton large carton

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.

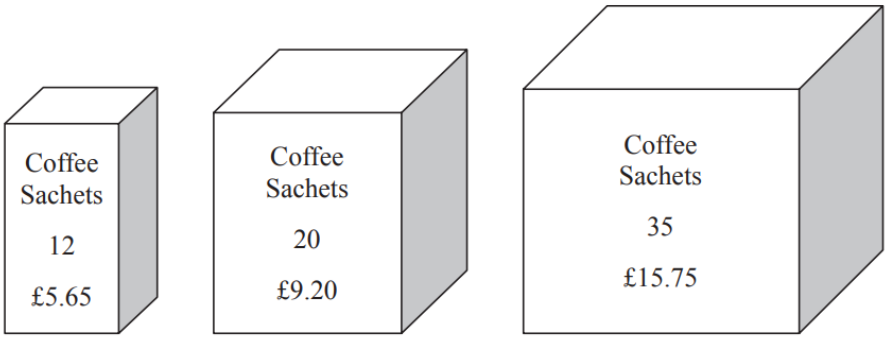
SMALL: $\frac{125}{£1.60}\text{g} = 78.125\ \text{g/£}$

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

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

Answer 4

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:

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

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

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

LARGE BOX IS BEST VALUE.

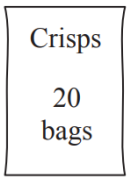
Answer 5

A shop sells bags of crisps in different size packs.

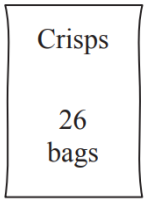
There are

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

£4 each pack



£4.99 each pack



£6.00 each 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.

(18) COST = $\frac{400p}{18}$ = 22.22p

(20) COST = $\frac{499}{20}$ = 24.95p

(26) COST = $\frac{600}{26}$ = 23.0769...p

18 PACK IS THE BEST VALUE FOR MONEY

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	No Water Meter
A charge of £28.20 per year	A charge of £107 per year
£0.9122 **plus**	
91.22p for every cubic metre of water used	
1 cubic metre = 1000 litres	

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?

TOTAL USAGE PER YEAR = 180×365

$= 65700$

$= 65.7\ m^3$

WITHOUT METER:

TOTAL COST PER YEAR = $28.20 + 0.9122 \times 65.7$

$= £88.13$

SINCE £88.13 < £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...

4PT: CPP $= \frac{118}{4}$

$= 29.5\text{p/pt}$

$4\overline{)118.20}$ $= 29.5$

6PT CPP $= \frac{174}{6}$

$= 29\text{p/pt}$

$6\overline{)174}$ $= 29$

6PT BOTTLE IS (SLIGHTLY) BETTER VALUE

Answer 8

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

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

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

THE FARM SHOP IS BETTER VALUE

Answer 9

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

Mega Bathrooms	**Bathroom Mart**
Sale 60% off normal price **then** 15% off	Sale $\frac{2}{3}$ off normal price

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

£1500 : 10% = £150

×3 (20% = £300) ×3

60% = £900

60% OFF : 1500 − 900 = £600

£600 : 10% = £60

\+ 5% = £30 +

15% = £90

15% OFF 600 − 90

= £510

BATHROOM MART

£1500 : $\frac{2}{3} \times 1500^{5} = £1000$

$\frac{2}{3}$ OFF : 1500 − 1000

= £500

SALLY SHOULD BUY

FROM BATHROOM MART