R8. Percentage increase/decrease NON CALC

OCR

(c) Decrease 650 by 40%.

(c) .... **[3]**

(c) Decrease 650 by 40%.

R8

40% of 650

40% × 650 = 260

10% = 65
40% = 260

650 − 260

=

390

(c) .... 390 ... [3]

(b) In 2016, Pippa paid £1650 rent.
In 2017, the rent increased by 14%.

Calculate the amount of rent she paid in 2017.

(b)   £ .... [3]

(b) In 2016, Pippa paid £1650 rent.
In 2017, the rent increased by 14%.

R8

Calculate the amount of rent she paid in 2017.

14% of £1650

X   = £231

£1650 × 1·14

£1650 + £231

£1881

(b) £...........£1881........................... **[3]**

17 The price of a computer was £750.

In a sale the price is reduced by 20%.
On the final day the **sale price** is reduced by a further 12%.

How much is saved in total by buying the computer on the final day of the sale?

£ .... [5]

17 The price of a computer was £750.

R8 In a sale the price is reduced by 20%.
On the final day the **sale price** is reduced by a further 12%.

$£750 \times 0.8 \times 0.88$

How much is saved in total by buying the computer on the final day of the sale?

20% of £750

= £150

£750 − £150

= £600

Final day

12% of £600

= £72

= £600 − £72

= £528

Saved

£750 − £528

= £222

222

£ .... 222 .... [5]

7   Naomi is given a 10% pay decrease.
    Her new wage is £252 per week.

R8

R12 What would be her weekly wage if, instead, she had received a 10% pay increase?

£ .... [5]

7   Naomi is given a 10% pay decrease.

R8   Her new wage is £252 per week.

R12   What would be her weekly wage if, instead, she had received a 10% pay increase?

÷9 {
£252 = 90%
£28 = 10%
£280 = 100%
} ÷9

×10 {
} ×10

$\frac{28}{9\overline{)252}}$

10% increase

£280 + 10%

£280 + £28

£ .... £308 .... [5]

280
+ 28
———
308

Edexcel

22 In a sale, the price of a cooker is reduced by 50%
     At the end of the sale, the sale price of the cooker is increased by 50%

     Betty says,

                    "The cooker is now the same price as it was before the sale."

     Is Betty correct?
     Explain why.

....

....

....

(Total for Question 22 is 2 marks)

22 In a sale, the price of a cooker is reduced by 50%
At the end of the sale, the sale price of the cooker is increased by 50%

Betty says,

"The cooker is now the same price as it was before the sale."

Is Betty correct?
Explain why.

Cooker = £120

Reduced by 50%.

50% of £120 = £60

New Cost = £60

Increase by 50%.

50% of £60 = £30

+ } £90

(Total for Question   is 2 marks)

No, I have used a counter example to show
why

20 Azmol is paid £1500 per month.
He is going to get a 3% increase in the amount of money he is paid.

Work out how much money Azmol will be paid per month after the increase.

20 Azmol is paid £1500 per month.
He is going to get a 3% increase in the amount of money he is paid.

Work out how much money Azmol will be paid per month after the increase.

$10\% = £150$

$1\% = £15$

×3 ( )×3

$3\% = £45$

£1545 ✓

18 Food Mart and Jan's Store sell boxes of the same type of breakfast cereal.

Each shop has a special offer.

Food Mart

Jan's Store

400 g

20% off the
normal price of
£5

400 g
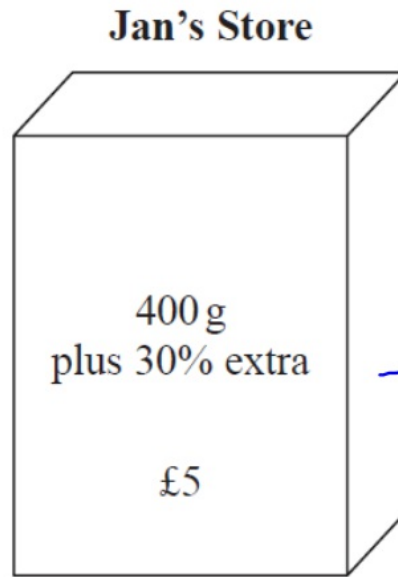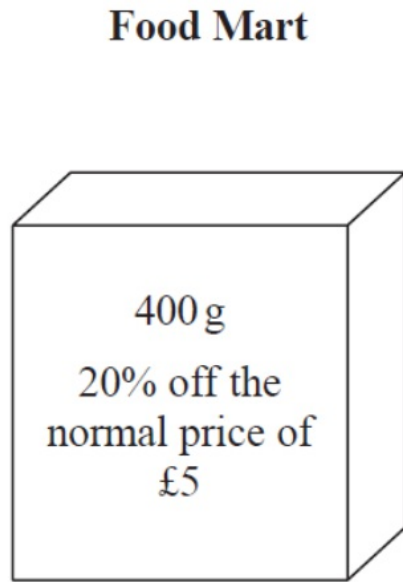plus 30% extra

£5
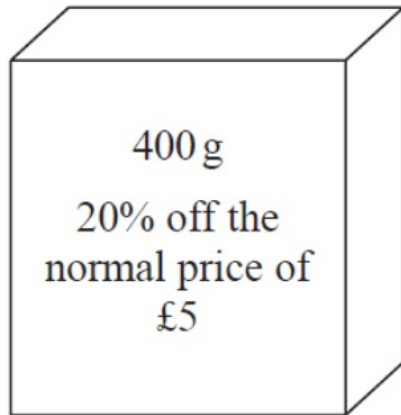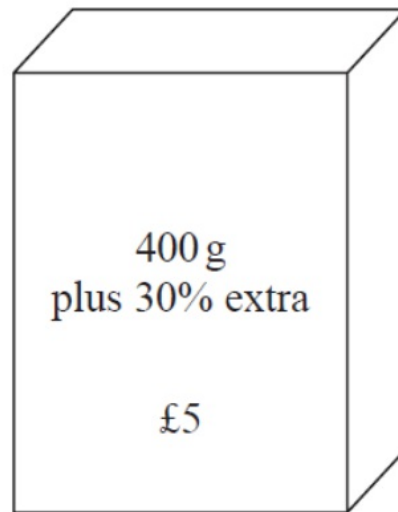
Which box of cereal is the better value for money?
You must show your working.

(Total for Question 18 is 4 marks)

18 Food Mart and Jan's Store sell boxes of the same type of breakfast cereal.

Each shop has a special offer.

R18
R8

Food Mart

400 g

20% off the
normal price of
£5

Jan's Store

400 g
plus 30% extra

£5

Which box of cereal is the better value for money?
You must show your working.

(Total for Question 18 is 4 marks)

Handwritten annotations:

Food Mart
20% of £5.00
10% = £0.50
20% = £1.00
20% off = £4

£4 for 400g

JS... 30% of 400 = 1
10% = 40g
30% = 120g
520g = £5

FM £4 = 400g
£1 = 100g
JS £5 = 520g
£1 = 104g   JS is better value ✓

22 A bonus of £2100 is shared by 10 people who work for a company.
40% of the bonus is shared equally between 3 managers.

R6

The rest of the bonus is shared equally between 7 salesmen.

R7

R8 One of the salesmen says,

"If the bonus is shared equally between all 10 people I will get 25% more money."

Is the salesman correct?
You must show how you get your answer.

(Total for Question 22 is 5 marks)

22 A bonus of £2100 is shared by 10 people who work for a company.
40% of the bonus is shared equally between 3 managers.
The rest of the bonus is shared equally between 7 salesmen.

R6
R7
R8   One of the salesmen says,

"If the bonus is shared equally between all 10 people I will get 25% more money."

Is the salesman correct?
You must show how you get your answer.

180 ... each salesman gets £180

$7 \overline{)1260}$

40% of £2100
10% = £210
40% = £840

60%
£2100 − 840
840
$\overline{1260}$ → 7 salesmen

if shared equally ... 10% of £2100
= £210 ✓

25% ($\frac{1}{4}$) of £180 ... £45
if he got 25% more ... £180 + £45 = £225
No he is not correct as £225 < £210

(Total for Question is 5 marks)

11 Here are two rectangles.

R8
N39

A

B

The length of rectangle **B** is 25% greater than the length of rectangle **A**.

The width of rectangle **B** is $\dfrac{3}{5} \times$ the width of rectangle **A**.

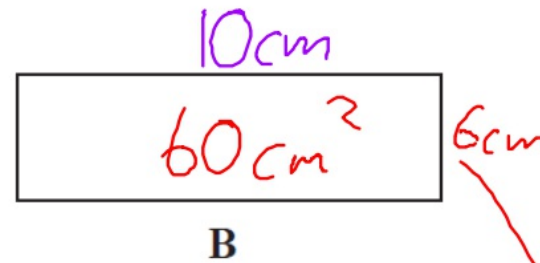Find the fraction $\dfrac{\text{area of rectangle } \mathbf{B}}{\text{area of rectangle } \mathbf{A}}$

Give your answer in its simplest form.

(Total for Question 11 is 3 marks)

11 Here are two rectangles.

8cm

$80 cm^2$ 10

A

R8
N39

25% of 8
= 2cm

10cm

$60 cm^2$ 6cm

B

Give these numbers

The length of rectangle **B** is 25% greater than the length of rectangle **A**.

The width of rectangle **B** is $\dfrac{3}{5} \times$ the width of rectangle **A**.

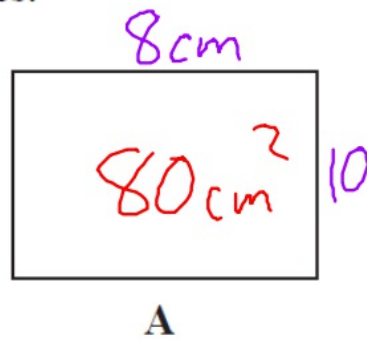Find the fraction $\dfrac{\text{area of rectangle } \mathbf{B}}{\text{area of rectangle } \mathbf{A}}$

Give your answer in its simplest form.

$\dfrac{3}{5}$ of 10
= 6

$\dfrac{60}{80}$

$\dfrac{3}{4}$ ✓

(Total for Question 11 is 3 marks)

AQA

18 Bottles of drink are for sale at three shops.

The normal price of a bottle is the same at each shop.

N13
R8

Shop A
Buy 1 bottle
Get 2 more bottles at half price

Shop B
Buy 2 bottles
Get 3 more bottles at half price

Shop C
30% off a bottle

What is the cheapest way to buy **exactly** 8 bottles?

You can buy from more than one shop.

You **must** show your working.

[3 marks]

Answer _____

18 Bottles of drink are for sale at three shops.

The normal price of a bottle is the same at each shop.

bottle = £1

N13
R8

Shop A
Buy 1 bottle
Get 2 more bottles at half price

Shop B
Buy 2 bottles
Get 3 more bottles at half price

Shop C
30% off a bottle

30% of £1
= 30p

A	B	C
£1	£1	70p
50p	£1	70p £1.40
50p	50p	70p
£1	50p	70p
50p	50p	70p
50p	£1	70p
£1	£1	70p
50p	50p	70p
50p	50p	70p
	50p	

What is the cheapest way to buy **exactly** 8 bottles?

You can buy from more than one shop.

You **must** show your working.

6 bottles from A

and 2 bottles from C

Answer _____