

Percentage Change

Question 1 (Level 2 Calculator)

Gosia runs a business.

She needs to buy a new laptop.

Gosia sees this advert.



She needs to work out how much VAT she is paying on the laptop.

Calculate the VAT.

Question 2 (Calculator Level 2)

Jon is designing the packaging for a packet of reduced sugar biscuits.

The sugar content has been reduced from 42 g to 27 g of sugar in each packet.

Jon wants to advertise the percentage reduction in sugar.

- (a) Work out the percentage reduction in sugar for Jon.
Give your answer to the nearest whole number

 %

- (b) Use a reverse calculation to show a check of your answer.

Question 3 (Calculator Level 2)

Oscar is writing a report about the number of social media posts at his company.

He has this information.

Year	2015	2016	2017	2018	2019
Number of posts	320	472	654	799	931

He needs to work out the percentage change in the number of posts from 2018 to 2019.

(a) Work out the percentage change in the number of posts from 2018 to 2019.

Give your answer to one decimal place.

 %

Oscar sets a target to post 1400 times in 2020.

He thinks this is an increase of more than $\frac{2}{5}$ compared to 2019.

(b) Is Oscar correct?

Question 4 (Calculator Level 2)

Alia has a diagram that measures 25 cm by 15 cm.

She resizes the diagram to measure 185 mm by 111 mm.

What percentage has Alia reduced the diagram by?

 %

Mark Scheme

Question	Process	Mark	Mark Ref	Evidence
Q1	Process to find original price	1 or	A	e.g. $(1599.99 \div 120) \times 100$ (=1333.325)
	Calculates difference to find VAT	2 or	AB	e.g. $1599.99 - '1333.325'$ (=266.665)
	Accurate figure	3	ABC	£266.66(5) OR £266.67
Total marks for question		3		

Question	Process	Mark	Mark Ref	Evidence
Q2(a)	Begins process to find percentage change	1 or	A	$42 - 27 (=15)$ and $'15' \div 42$ (=0.357..)
	Full process to find percentage change	2 or	AB	$'0.357...'$ x 100 (=35.7..)
	Accurately rounded figure	3	ABC	36(%)
Q2(b)	Valid reverse check	1	D	$35.7.. \div 100 = 0.357..$ or $0.357.. \times 42 = 15$ or $15 + 27 = 42$
Total marks for question		4		

Question	Process	Mark	Mark Ref	Evidence
Q3(a)	Selects correct figures from table	1 or	A	931 and 799 seen May be indicated on table
	Process to find percentage change	2 or	AB	$931 - 799 (=132)$ AND $('132' \div 799) \times 100 (=16.52..)$ oe
	Accurate figure correct to 1 decimal place	3	ABC	16.5%

Q3(b)	Process to find fraction of amount	1 or	D	$(931 \div 5) \times 2 (=372.4)$
	Process to increase	2 or	DE	$931 + '372.4' (=1303.4)$ OR $1400 - 931 (=469)$
	Valid decision and accurate figure	3	DEF	Yes AND 1303(.4) Yes AND 372.4 AND 469
Total marks for question		6		

Question	Process	Mark	Mark Ref	Evidence
Q4	Uses consistent units	1	A	250mm or 150mm or 18.5cm or 11.1cm May be seen in subsequent workings
	Process to find percentage change	1 or	B	$(25 - 18.5) \div 25 (=0.26)$ or $(15 - 11.1) \div 15 (=0.26)$ AND $'0.26' \times 100 (=26)$
	Accurate figure	2	BC	26(%)
Total marks for question		3		