

Functional Skills Mathematics | Level 2

Division Practice

Questions

Q1.

A company advertises its products for sale in France.

One French website charges €195 per advert.
The company buys 5 of these adverts.

The exchange rate is £1 = 1.1025 euros.

What would be the total cost of the 5 adverts in pounds?

(3)

Use the space below to show clearly how you get your answer.

(Total for question = 3 marks)

Q2.

Andy is bowling with friends.

The last time Andy went bowling he had a mean score of 158 per game.

After 3 games Andy has a total score of 473

He thinks he needs to score over 160 in game 4 to get a mean score greater than 158

Is Andy correct?

Show why you think this.

Show a check of your working.

(4)

Use the space below to show clearly how you get your answer.

Use the space below to show your check.

(Total for question = 4 marks)

Q3.

Enid owns some coffee shops.
Her coffee shops are open for 6 days each week.

Enid wants to find the average sales from each of her coffee shops.

The table gives information about sales of coffee from her coffee shop in London for one week.

	Mon	Tue	Wed	Thu	Fri	Sat
Number of cups of coffee sold	225	188	208	241	222	320

Work out the average number of cups of coffee sold per day for Enid.

Show a check of your working.

(3)

Use the space below to show clearly how you get your answer.

Use the space below to show your check.

(Total for question = 3 marks)

Q4.

Caz is offered a new contract at work.
He can choose how he would like to be paid.

Option A	Option B	Option C
Salary £37 200 per year	18% of the value of his sales each month	£1000 each month plus $\frac{1}{8}$ of the value of his sales each month

Caz expects to make sales of £21 500 each month.
He wants to be paid as much as possible.

Which option should Caz choose?
Show why you think this.

(5)

Use the space below to show clearly how you get your answer.

(Total for question = 5 marks)

Q5.

Scott withdraws 2000 Moroccan dirham from a cash machine in Morocco.

These are the charges that Scott has to pay.

- 2.75% of the cash he withdraws for changing currency.
- 3% of the cash he withdraws for using a cash machine in Morocco.

Scott has to pay both charges in British pounds.

1 British pound = 12.74 Moroccan dirham

What is the total of the charges in British pounds that Scott has to pay?

(4)

Use the space below to show clearly how you get your answer.

(Total for question = 4 marks)

Q6.

Kirsty wants to buy a princess outfit for her daughter to wear at a party.

She finds these items on the internet.

She needs to order a dress, a pair of shoes, a tiara and a wig.

Dress	£19.99
Pair of shoes	£8.99
Tiara	£6.99
Wig	£4.99
Delivery charge	£5.50
Free delivery for orders over £25	

Kirsty has a voucher that gives her $\frac{1}{3}$ off the total price.

How much will Kirsty pay in total?

Show a check of your working.

(4)

Use the space below to show clearly how you get your answer.

Use the space below to show your check.

(Total for question = 4 marks)

Q7.

Mia needs a new contract for her office smartphone.

She thinks she will use an average of 500 MB of data each month.

Mia checks how much data she has used.

	Mar	Apr	May	Jun	Jul	Aug
Data used (MB)	648	593	499	603	482	?

Mia will get a 1 GB contract if the mean average is more than 500 MB of data over the 6 months.

How much data must Mia use in August for the mean average to be 500 MB?

You must show a check on your working.

(4)

Use the space below to show clearly how you get your answer.

Use the space below to show a check of your working.

(Total for question = 4 marks)

Q8.

Moira is going to join the gym.
She sees these two offers.

One-year gym membership

£69.99 per month
No joining fee

Pay now for 11 months and get 1 month for free

Special offer

Locker hire for a year – usual price £150
get 30% off the usual price

Moira wants to use both of these offers.
She thinks she will pay less than £900 in total.

Is Moira correct?

Show why you think this.

(5)

Use the space below to show clearly how you get your answer.

(Total for question = 5 marks)

Q9.

Pat and Chris have paid to take up to 40 kg of luggage on the flight.

Pat weighs the luggage on their bathroom scales.

The total weight of the luggage is 6 stone and 2 pounds.

Pat knows that

- 1 stone = 14 pounds
- 2.2 pounds = 1 kg

Does the luggage weigh less than 40 kg?

(3)

Use the space below to show clearly how you get your answer.

(Total for question = 3 marks)

Q10.

Dishan wants to start saving money.

He gets £1650 a month after tax.

Dishan needs to make these payments each month

- rent – £780
- bills – £135
- shopping – £170

After making these payments each month, Dishan will put 60% of the money he has left into his savings account.

He thinks that after one year he will have put more than £4000 into his savings account.

Is Dishan correct?

Show why you think this.

(4)

Use the space below to show clearly how you get your answer.

(Total for question = 4 marks)

Mark Scheme

Q1.

Process	Mark	Evidence
Process to convert between currencies or work with 5 adverts	1 or	$195 \div 1.1025 (= 176.87..)$ OR $195 \times 5 (=975)$
Full process to find total amount	2 or	'176.87' $\times 5 (=884.35..)$ OR '975' $\div 1.1025 (=884.35..)$
Accurate figure	3	(£) [884 , 885] Must not come from incorrect working

Q2.

Process	Mark	Evidence
Starts to work with mean average	1 or	$158 \times 4 (=632)$ OR $473 + 160 (=633)$
Finds total score if 160 is scored in game 4 or total score needed for 3 games if 160 is scored in game 4	2 or	$473 + 160 (=633)$ and $158 \times 4 (=632)$ OR '633' $\div 4 (=158.25)$ OR '632' $- 160 (=472)$ OR '632' $- 473 (=159)$
Correct conclusion and accurate figures	3	No and 632 and 633 OR No and 158.25 is less than 159 OR No and 472 OR No and 159
Valid check of their calculation	1	Reverse or alternative method for any of their calculations

Q3.

Process	Mark	Evidence
Full process to find mean or median	1 or	$(225 + 188 + 208 + 241 + 222 + 320) \div 6 (= 234)$ OR $(222 + 225) \div 2 (=223.5)$
Correct answer for their average	2	234 OR 223.5
Valid check	1	Valid check e.g. alternative method or reverse calculation or estimation

Q4.

Process	Mark	Evidence
Decision to work with months or years	1	E.g. $37200 \div 12 (=3100)$ OR $21500 \times 12 (=258000)$ May be seen in a later calculation
Process to work with percentages	1	$21500 \times 0.18 (=3870)$ OR $'258000' \times 0.18 (=46440)$
Process to work with fraction	1 or	$21500 \div 8 (=2687.5)$ OR $'258000' \div 8 (=32250)$
Full process to find figures to compare	2 or	$'2687.5' + 1000 (=3687.5)$ OR $'32250' + 12 \times 1000 (=44250)$
Decision with correct figures	3	Option B and (£)3100 and (£)3870 and (£)3687.5(0) OR Option B and (£)46440 and (£)44250

Q5.

Process	Mark	Evidence
Correct currency conversion seen	1	e.g. $2000 \div 12.74 (=156.98..)$ or $'55' \div 12.74 (=4.31..)$ oe or $'60' \div 12.74 (=4.70..)$ oe or $'115' \div 12.74 (=9.02...)$
Begins to work with percentage	1 or	$2000 \times 2.75 \div 100 (= 55)$ oe or $2000 \times 3 \div 100 (= 60)$ oe OR $(2.75 + 3) \div 100 (= 0.0575)$ oe OR $'156.98..' \times 2.75 \div 100 (=4.31..)$ or $'156.98..' \times 3 \div 100(=4.70..)$
Full process to find total transaction charge	2	$'4.31...' + '4.70..' (=9.02...)$ OR $'156.98..' \times (2.75 + 3) \div 100 (=9.02...)$ oe OR $2000 \times (2.75 + 3) \div 100 (= 115)$ oe OR $'55' + '60' (=115)$
Correct answer in correct money notation	1	£9.02 or £9.03

Q6.

Process	Mark	Evidence
Process to find a 1/3 of the total price	1 or	$(19.99 + 8.99 + 6.99 + 4.99) \div 3 (=13.653..)$ oe Allow 46.46 \div 3 (=15.48..) Allow use of 0.33... or 0.66.. or better
Full process to find cost of outfit	2 or	'13.653..' \times 2(=27.306...) oe Allow 46.46 \times 2 \div 3 (=30.97..)
Correct answer in correct money notation	3	£27.30 or £27.31 in correct money notation
Valid check	1	Valid check. e.g. reverse calculation or estimation

Q7.

Process	Mark	Evidence
Start to work with average	1 or	648 + 593 + 499 + 603 + 482 (=2825) OR 500 \times 6 (=3000)
Uses mean to find missing data quantity	2 or	'3000' - '2825' (=175) OR '3000' - 648 - 593 - 499 - 603 - 482 (=175) OR Full correct process that leads to 175
Correct answer	3	175 (MB)
Valid check of their calculation	1	Reverse or alternative method for any of their calculations

Q8.

Process	Mark	Evidence
Full process to find total cost for 11 months	1	$69.99 \times 11 (=769.89)$ oe Allow use of 70
Process to begin to find the discount	1 or	$0.3 \times 150 (=45)$ oe OR $(100 - 30) \div 100 (=0.7)$ oe
Full process to find the discounted price	2	$0.7 \times 150 (=105)$ oe OR $150 - '45' (=105)$
Full process to find total cost or figures to compare	1	'769.89' + '105' (=874.89) OR $900 - '769.89' - '105' (=25.11)$ OR $900 - '769.89' (=130.11)$
Valid conclusion with accurate figures	1	Yes AND (£)874.89 or (£)875 OR Yes AND (£)25.11 or (£)25 OR Yes AND (£)130.11 and (£)105

Q9.

Process	Mark	Evidence
Changes stones into pounds	1	$6 \times 14 (=84)$ OR $6 \times 14 + 2(=86)$
Converts between kg and pounds	1 or	$40 \times 2.2 (=88)$ OR '84' $\div 2.2(=39.09..)$ OR '86' $\div 2.2 (=39.09..)$ OR '84' $\div 2.2(=38.18..)$
Correct conclusion with correct figures	2	Yes and 88(pounds) and 86(pounds) OR Yes and 39(.09...)(kg)

Q10.

Process	Mark	Evidence
Works with disposable income	1 or	$1650 - 780 - 135 - 170$ $(=565)$ OR $1650 \times 12 (=19800)$ OR $780 \times 12(=9360)$ and $135 \times 12(=1620)$ and $170 \times 12 (=2040)$ OR $4000 \div 12 (=333.33..)$
Works with 60% or 12 months	2 or	'565' $\times 0.6 (=339)$ oe OR '19800' - '9360' - '1620' - '2040' (=6780) OR '565' $\times 12 (=6780)$ oe OR $4000 \div 12 (=333.33..)$ and $1650 - 780 - 135 - 170 (=565)$
Full process to find figures to compare	3 or	'339' $\times 12 (=4068)$ oe OR '6780' $\times 0.6 (=4068)$ oe OR '333.33..' $\div 0.6$ $(=555.55..)$
Valid conclusion with accurate figures	4	Yes AND (£) 4068 OR Yes AND (£)565 and (£)555(.55..)