# Functional Skills Mathematics | Level 1

# Performing a Check

Checking that your answer is correct is an important skill. Too many people accept the first answer they get without questioning its validity. In addition, there will be specific questions (and marks) on the Level 1 Functional Skills assessment that will assess your ability to carry out a check of your answer.

**Quick Quiz**

Without working out the answers in full, use your knowledge of maths to decide whether the answers to these questions could be correct:

1. 11 x 124 = 1361              CORRECT / INCORRECT

2. 27 divided by 0.3 = 8.1      CORRECT / INCORRECT

3. 77 x 13 = 1002              CORRECT / INCORRECT

4. The mean of 27, 34 and 25 is 36      CORRECT / INCORRECT

All the answers are incorrect. Without working them out, how do we know this?

1. Multiplying an odd and even number always gives an even number as the answer.

2. Dividing by a decimal less than one will give a higher answer than the first number not a lower one.

3. Multiplying two odd numbers always gives an odd number as the answer.

4. When working out the mean, the answer should not be higher than the highest number or lower than the lowest number.

**Performing a Check in the assessment**

In the Level 1 assessment, you will be asked to perform a check of your answers for certain questions. This question can be asked in different ways:

- We can ask you to perform a simple check with not restrictions.
- We can ask you to perform a reverse calculation.
- We can ask you to use estimation.
- We can ask you to check a specific part of your working out.

**Worked Example 1**

> Gordon offers a 20% discount to new customers at his online music store.
> The cost of the new Melinda Lieb CD is £15.99.
> The cost of the new Alia deluxe CD is £24.99
> Delivery is £3.99
>
> a. How much would it cost for a new customer to buy both CDs?
>
> (4)
>
> b. Use estimation to show a check of your answer
>
> (1)

**Part a**

The total costs of the CDs and delivery is £15.99 + £24.99 + £3.99 = £44.97

20% of £44.97 is £8.99

Total cost with discount is £44.97 - £8.99 = £35.98

**Part b**

Using estimation total costs is £16 + £25 + £4 = £45

20 of £45 is £9

Total cost would be £36. This shows my original answer is most likely correct.

**Worked Example 2**

Michael wants to buy a new car.
He needs to pay

- a cash deposit of £5875
- £229.20 each month for 24 months

Michael thinks the total amount he will pay is less than £11,500.

a. Is Michael correct?

(4)

b. Check your answer by using a reverse calculation on the total monthly costs.

(1)

**Part a**

Total monthly costs £229.20 x 24 = £5500.80

Total payment is £5500.80 + £5875 = £11,375.80

So, yes, Michael is correct.

**Part b**

£5500.80 divided by 24 is £229.20 showing my answer is correct.

**Top Tip**

If the exam question needs a decision, remember to give that decision in your answer as when as showing your reasoning. The above question about Michael needs a yes and how much it will cost to gain full marks.

**Exam Style Questions**

1.

Atif has received a text from his bank showing the following debits

- Restaurant £78
- Football tickets £167

His balance before the debits was £841

Atif wants to pay for a holiday that costs £528.

a. Does Atif have enough money to pay for the holiday?

(3)

b. Use estimation to show a check of your answer.

(1)

2.

Suky is an apprentice at a large organisation with 6000 employees.

15% of those employees commute over one hour to work.
Suky thinks 900 employees commute over one hour to work

a. Is Suky correct?

(3)

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

(1)

3.

Jo works in a cafe.
She sells cups of tea and cups of coffee in the ratio 1:3
On Monday Jo sold a total of 244 cups of tea and cups of coffee.
Jo thinks she must have sold more than 200 cups of coffee.

a. Is Jo correct?

(3)

b. Use estimation to show a check of your answer.

(1)

4.

Anne works in a restaurant. She gets a wage of £240 each week.
Anne owes her mum £1200
She says
        "I will pay my mum back in 26 weeks if I give her 25% of my wage each week."

a. Is Anne correct?

(3)

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

(1)

5.

Luke is a member of a rowing club.
The rowing club organises a charity event using indoor rowing machines.

The table shows the time it took Luke to row 10 km in 6 training sessions.

| Time taken (minutes) | 54 | 52 | 47 | 51 | 45 | 42 |
|---|---|---|---|---|---|---|

Luke can enter the rowing event if his mean time to row 10 km is less than 50 minutes.

a. Is his mean time to row 10 km less than 50 minutes?

(3)

b. Show a check of your answer for the mean.

(1)

6.

Andi wants to organise a tennis tournament.
She sees this poster at the activity centre.

Book a tennis court
£5.50 for 1 hour

Andi needs to book 2 tennis courts for 3 hours.
She thinks the total cost will be more than £30

a. Is the total cost more than £30?

(3)

b. Show a check of your working.

(1)

7.

Mahir is the cleaner at The Palace restaurant.
He is going to clean the floor with a mixture of floor cleaner and water.

Mahir knows

- to use 30 ml of floor cleaner for every 1 litre of water
- 1 capful of floor cleaner is 20 ml.

Mahir puts 4 litres of water in a bucket.

He thinks he needs to add 5 capfuls of floor cleaner to the water.

a. Is Mahir correct?

(3)

b. Show a check of your working.

(1)

8.

Jermaine sells perfume.
He has 2 litres of perfume to sell.

Jermaine has 120 empty bottles.
Each bottle can hold 15ml of perfume when full.

a. Does Jermaine have enough perfume to fill up all the bottles?

(3)

b. Show a check of your working.

(1)

**Answers**

1a.
£841 – (£78 + £167)
£841 - £245 = £596
Yes, Atif has enough money

1b.
£840 – (£80 + 170)
£840 - £250 = £590

2a.
6000 divided by 10 = 600 = 10%
600 divided by 2 = 300 = 5%
15% = 600 + 300 = 900
Suky is correct.

2b.
600 x 10 = 6000
(other reverse calculations are acceptable)

3a.
244 divided by number of parts
244 divided by 4 = 61
61 x 3 = 183
Jo is incorrect

3b.
240 divided by 4 = 60
60 x 3 =180

4a.
£240 divided by 4 = £60
£1200 divided by £60 = 20
Anne is not correct as it would take 20 weeks

4b.
60 x 20 = 1200

5a.
54 + 52 + 47 + 51 +45 + 42 = 291
291 divided by 6 is 48.5
Yes, Luke's mean time is 48 min 30 sec
5b.
48.5 x 6 = 291

6a.
£5.50 x 2 = £11
£11 x 3 = £33
Yes the total cost is more than £30


6b.
33 divided by 3 = £11


7a.
4 x 30ml = 120ml
120ml divided by 20ml = 6
Mahir is incorrect as he will need 6 capfuls of cleaner.


7b.
6 x 20 ml = 120ml


8a.
120 x 15ml = 1800ml
1 litre = 1000ml
Yes he has enough perfume as he only need 1800ml and he has 2000ml.


8b.
1800 divided by 15 = 120