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**FUNCTIONAL SKILLS**

Maths Level 2



**Area: Numbers and the number system**

Criterion: Carry out calculations with numbers up to one million including strategies to check answers including estimation and approximation

**Calculations with numbers up to 1 million**

You may not always be told which calculation to use. Therefore, it is important to read the question very carefully as you will need to work out which calculation to use.

**Below is an example.**

Sarah has £500. She needs to pay her council tax bill, which is £180 and her electricity bill, which is £253. She also wants to buy a new pair of shoes for £60.

Will Sarah have enough money left to buy the shoes once she has paid her bills?

**Explain your answer.**

You need to subtract £180 and £253 from £500, then see how much is left.

500 – 180 – 253 = 67

Sarah has **£67** left once she has paid her bills so, yes, she does have enough left over to buy the shoes as the shoes are less than £67

**Addition (+) and subtraction (-)**

You will also need to be able to add and subtract without using a calculator.

**Example of an addition sum:**

Last month, 22,382 passengers flew to Greece and 112,958 flew to Spain.

What is the total number of passengers that flew to both Greece and Spain in the last month?

**112958**

**+ 22382**

**135340**

**135,340** passengers flew to both Greece and Spain last month.

**Example of a subtraction sum:**

Line up the columns and subtract the columns from right to left. Remember to exchange from the left when the top digit is smaller than the bottom digit.

What is 510,657 – 87,151?

**510657**

**- 87151**

**423506**

510,657 – 87,151 = **423,506**

**Checking your answers**

Adding and subtracting are opposite calculations. Once you have calculated the answer, you can then check if you are correct by using the opposite calculation.

If your answer is correct, you will return to the number you started with**.**

**For example:**

94 + 23 = 117

Use the opposite calculation to check your answer.

117 – 23 = 94

**or**

117 – 94 = 23

You only need to demonstrate 1 method to show that you have checked your answer.

**Using the information provided, work out the answers to the following questions.**

**Question 1a**

Calculate 352,837 + 28,639

(Show your working out.)

(1 mark)

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**Question 1b**

Show how you can check that your answer to Question 1a is correct.

(Show your working out.)

(1 mark)

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**Question 2a**

Calculate 47,596 + 2,405,679

(Show your working out.)

(1 mark)

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**Question 2b**

Show how you can check that your answer to Question 2a is correct.

(Show your working out.)

(1 mark)

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**Question 3a**

Calculate 381,476 – 28,639

(Show your working out.)

(1 mark)

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**Question 3b**

Show how you can check that your answer to Question 3a is correct.

(Show your working out.)

(1 mark)

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**Multiplication (x) and division (÷)**

Some questions involve multiplication and division.

For the non-calculator component, you will need to know how to multiply and divide without using a calculator.

**Multiplication example:**

Mark needs to buy 200 large envelopes for the office at 57p each.

How much money does Mark need?

Each envelope costs 57p. So, you need to calculate 200 x 0.57.

200 x 0.57 = **£114**

**Division example:**

A group of 4 employees match 5 numbers on the lottery and win £156,400. How much will each employee receive?

£156,400 divided by 4 employees.

156,400 ÷ 4 = 39,100

Each employee will receive **£39,100**

**Checking your answer**

As with addition and subtraction, multiplication and division are also opposite calculations.

To check that your answer is correct, use the opposite calculation.

If your calculation is correct, you will arrive at the number you started with.

**Example:**

What is 43 x 8?

43 x 8 = 344

**Opposite calculations to check your answer:**

344 ÷ 8 = 43 or 344 ÷ 43 = 8

You only need to demonstrate 1 method to show that you have checked your answer.

**Question 4a**

Calculate 477,138 ÷ 562

(Show your working out.)

(1 mark)

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**Question 4b**

Show how you can check that your answer to Question 4a is correct.

(Show your working out.)

(1 mark)

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**Question 5a**

Calculate 452 x 9

(Show your working out.)

(1 mark)

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**Question 5b**

Show how you can check that your answer to Question 5a is correct.

(Show your working out.)

(1 mark)

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Last month, 125,982 passengers used the local bus service to travel from the   
town high street to a local village. For the same journey,12,958 people used a taxi.

Calculate how many more passengers used the bus service than a taxi to travel.

(Show your working out and write your answer in the box below.)

(1 mark)

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Your monthly wage is £1,756.89 after tax. You need to pay the following:

|  |  |
| --- | --- |
| Bill | Cost |
| Rent | £475.70 |
| Utilities | £221.45 |
| Phone | £34.27 |

How much will you have left after these deductions?

(Show your working out and write your answer in the box below.)

(3 marks)

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**Answers**

**Addition and subtraction**

**Question 1a**

352,837 + 28,639 = 381,476

**Question 1b**

381,476 – 28,639 = 352,837 **or** 381,476 – 352,837 = 28,639

**Question 2a**

47,596 + 2,405,679 = 2,453,275

**Question 2b**

2,453,275 – 47,596 = 2,405,679 **or** 2,453,275 – 2,405,679 = 47,596

**Question 3a**

381,476 – 28,639 = 352,837

**Question 3b**

352,837 + 28,639 = 381,476 **or** 28,639 + 352,837 = 381,476

**Multiplication and division**

**Question 4a**

477,138 ÷ 562 = 849

**Question 4b**

849 x 562 = 477,138 **or** 562 x 849 = 477,138

**Question 5a**

452 x 9 = 4,068

**Question 5b**

4,068 ÷ 9 = 452 **or** 4,068 ÷ 452 = 9

**Exam practice**

**Exam practice 1**

125,982 – 12,958 = 113,024

**Exam practice 2**

£1,756.89 – £475.70 = £1,281.19

£1,281.19 – £221.45 = £1,059.74

£10,759.74 – £34.27 = £1,025.47

**Or**

£475.70 + £221.45 + £34.27 = £731.42

£1,756.89 – £731.42 = £1,025.47

**Your functional skills exam**

Your functional skills exams will consist of 2 papers.   
These papers will take place over the following time periods:

* Non-calculator paper – 40 minutes
* Calculator – 1 hour 50 minutes

Further information on the format that your test will take can be obtained from your training provider.

**Hints and tips**

* Find out what format your exam will be in. It may be paper-based or   
  on-screen.
* Plan what you are going to revise in advance. Don’t leave it until the last minute.
* Do as many past papers as you can so you are prepared for the day. If possible, try to complete the past papers following the same format as the actual exam.
* Find a quiet place to study and revise. It helps to sit at a table or a desk, don’t revise in bed.
* Don’t stay up all night revising the night before your exam. It’s important to have a good rest so you feel refreshed and ready to go.
* Read the question 3 times. The first time to ensure you understand what is being asked, the second time to get an understanding of what you need to do, and a third time to figure out exactly what maths techniques you should be applying.
* If you are struggling with a question, skip it and come back to it later. Try not to sit getting worked up about a difficult question, it will only waste exam time. Move on and come back to it after you have answered the other questions.
* Take note of the number of marks available. This will give you an indication of how much working out you must show. For example, 1 mark will need an answer only and more marks will need you to show your working out.
* When you’ve finished the exam, go back and check your answers. If you still have time remaining, use it to check your answers and when you have checked your answers check them again.