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**FUNCTIONAL SKILLS**

Maths Level 1



**Area: Numbers and the number system**

Criterion: Follow the order of precedence of operators.

**BIDMAS**

Mathematical calculations should be performed in a certain order.

The order we follow is known as **BIDMAS**,or sometimes, **BODMAS.**

The letters of BIDMAS tell us which order to perform the calculation in:

**B**rackets

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**D**ivision

**M**ultiplication

**A**ddition

Learning this acronym can be a very helpful tool to jog your memory when carrying out calculations.

**S**ubtraction

**BIDMAS**

Example **BIDMAS** equation: 5 x ( + 4) – 6 =

Using **BIDMAS**, we must start with the letter **B** for Bracket, we first need to look within the brackets.

Within the brackets, we can see 2 operations: **an** **index/power and an addition.**

The letter **I** comes before **A** in **BIDMAS**. Therefore, we must calculate first.

= 3 x 3 = 9

Then, add 4.

e.g., 5 x (9 + 4) – 6 =

This becomes 5 x (13) – 6 =

This leaves a multiplication and a subtraction. **M** appears in BIDMAS before **S**,so we must multiply next.

5 x 13 = 65

Finally, subtract 6

65 – 6 = 59

Answer: 5 x ( + 4) – 6 = **59**

**BIDMAS**

**Example question**

Here are some simpler example calculations to clarify your understanding of the **BIDMAS** process.

What is 5 + 10 ÷ 2?

Following **BIDMAS**, the division is calculated first.

5 + 10 ÷ 2 = 5 + 5

Secondly, calculate the addition.

5 + 5 = 10

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If you did not follow BIDMAS and completed the equation how it was presented, this would be your calculation:

5 + 10 ÷ 2 = 15 ÷ 2 = 7.5 **(which is wrong.)**

**B**rackets

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**REMEMBER:**

**Example question**

Calculate: (6 + 2) x (9 – 2)

Following BIDMAS, firstly calculate what is inside the brackets.

(6 + 2) x (9 – 2) = 8 x 7

Secondly, work out the multiplication.

8 x 7 = 56

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Complete without using a calculator.

**Question 1**

What is 7?

(Write your answer in the box below.)

**Question 2**

Calculate65 ÷ (9 – 4)

(Write your answer in the box below.)

**Question 3**

Calculate6 x (12– 3)

(Write your answer in the box below.)

**Question 4**

Calculate the value of X.

X = 10 + 9 x 42

(Write your answer in the box below.)

**Question 5**

Calculate 4 + 4 x 4 – 4

(Write your answer in the box below.)

**REMEMBER:**

**B**rackets

**I**ndices (or **O**rders)

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**M**ultiplication

**A**ddition

**S**ubtraction

A yellow calculator with a grey sticker

Description automatically generated**Exam questions**

Complete without using a calculator.

**Exam practice 1**

Calculate the value of Y.

Y = + (4 x 5)

(Write your answer in the box below.) *(1 mark)*

**Exam practice 2**

Calculate the value of Z.

Z = (84 ÷ 12) + (7 x 5)

(Write your answer in the box below.) *(1 mark)*

**Exam practice 3**

Calculate 12 + (6 x 6) ÷ 12

(Write your answer in the box below) *(1 mark)*

**Exam practice 4**

Calculate the value of W.

W = 18 + 8 x 25

(Write your answer in the box below.) *(1 mark)*

**Summary**

Mathematical calculations should be performed in a certain order.

The order we follow is known as **BIDMAS** or sometimes **BODMAS**.

The letters of **BIDMAS** tell us which order to perform the calculation.

**B**rackets

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**S**ubtraction

**Answers**

**BIDMAS (BODMAS) practise**

**Question 1**: 7

First, calculate the indices. = 36

36 – 42 7

Next, complete the division. 7 = 6

36 - 6

Finally, calculate the subtraction. 36 – 6 = **30**

**Question 2**: 65 ÷ (9 – 4)

First, calculate what is in the brackets. (9 - 4 = 5)

65 ÷ 5

Finally, calculate the division.

65 ÷ 5 = **13**

**Question 3**: 6 x (12– 3)

First, calculate what is in the brackets. (12 – 3 = 9)

6 x 9

Finally, multiply 6 by 9.

6 x 9 = **54**

**Question 4**: calculate the value of X.

X = 10 + 9 x 42

First, multiply 9 by 42. 9 x 42 = 378

10 + 378

Finally, complete the addition. 10 + 378

10 + 378 = 388

**X = 388**

**Question 5**: 4 + 4 x 4 – 4

First, complete the multiplication. 4 x 4 = 16

4 + 16 – 4

Next, calculate the addition. 4 + 16 = 20

20 – 4

Finally, complete the subtraction.

20 – 4 = **16**

**Exam practice**

**Exam practice 1**: calculate the value of Y.

Y = + (4 x 5)

First, calculate the indices. = 16

Y = 16 + (4 x 5)

Next, calculate what is inside the brackets. (4 x 5 = 20)

Y = 16 + 20

Finally, add 16 and 20.

16 + 20 = 36

**Y = 36**

**Exam practice 2**: calculate the value of Z.

Z = (84 ÷ 12) + (7 x 5)

First, calculate what is inside the first set of brackets. (84 ÷ 12 = 7)

Z = 7 + (7 x 5)

Next, calculate what is inside the second set of brackets. (7 x 5 = 35)

Z = 7 + 35

Finally, complete the addition.

**Z = 42**

**Exam practice 3**: calculate 12 + (6 x 6) ÷ 12

First, calculate what is inside the brackets. (6 x 6 = 36)

12 + 36 ÷ 12

Next, calculate the division. 36 ÷ 12 = 3

12 + 3

Finally, complete the addition.

**15**

**Exam practice 4**: calculate the value of W.

W = 18 + 8 x 25

First, calculate the multiplication. 8 x 25 = 200

W = 18 + 200

Finally, complete the addition. 18 + 200 = 218

**W = 218**

**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.