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**FUNCTIONAL SKILLS**

Maths Level 1



**Area: Numbers and the number system**

Criterion: Calculate the squares of one-digit and two-digit numbers

**Squaring one-digit numbers**

Squaring a number means multiplying the number by itself.

This is shown by a small ² to the top-right of a number.

For example, 3² means 3 x 3, which equals 9.

3² **does not** mean 3 x 2.

One-digit numbers are the numbers 1 to 9. You need to be able to recall their squares. Here are their square numbers:

1² = 1 x 1 = 1

2² = 2 x 2 = 4

3² = 3 x 3 = 9

4² = 4 x 4 = 16

5² = 5 x 5 = 25

6² = 6 x 6 = 36

7² = 7 x 7 = 49

8² = 8 x 8 = 64

9² = 9 x 9 = 81

**Question 1**

Calculate:

8²

(Show your working out.)

(1 mark)

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**Question 2**

Calculate:

6²

(Show your working out.)

(1 mark)

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**Question 3**

Calculate:

9²

(Show your working out.)

(1 mark)

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**Squaring two-digit numbers**

Squaring two-digit numbers can be more complex, but you can break it down into simpler steps. Here’s a common method to help:

**Step 1:** Write down the two-digit number.

**Step 2:** Multiply the number by itself.

For example, to square 12:

12² = 12 x 12 = 144

**Long multiplication method:**

Break the number into tens and units. For example, 12 can be partitioned into 10 and 2.

Multiply each part separately and add the results:

12² = 12×12

= (10 + 2) x (10 + 2)

= (10 x 10) + (10 x 2) + (2 x 10) + (2 x 2)

= 100 + 20 + 20 + 4

= 144

**Question 4**

Calculate:

15²

(Show your working out.)

(2 marks)

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**Question 5**

Calculate:

11²

(Show your working out.)

(2 marks)

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**Question 6**

Calculate:

17²

(Show your working out.)

(2 marks)

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**Exam practice 1**

A square has a length of 20cm. Calculate the area of the square.

(Show your working out.)

(2 marks)

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**Exam practice 2**

Calculate the area of a square which has a length of 18cm.

(Show your working out.)

(2 marks)

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**Answers**

**Squaring one-digit numbers**

Question 1: 64

Question 2: 36

Question 3: 81

**Squaring two-digit numbers**

Question 4: 225

Question 5: 121

Question 6: 289

**Exam practice**

Exam practice 1:400cm ²

Exam practice 2: 324cm ²

**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.