

## Y11 GCSE Maths – 100 Days To Go (with Diagnostic Questions)

### Introduction

Diagnostic Questions are a quick and accurate way of assessing a student's knowledge and understanding of a key skill or concept.

### What is a Diagnostic Question?

We can best illustrate the key concepts behind Diagnostic Questions with a simple example.

10 cm

7 cm

What is the area of the shape above?

a) 17 cm<sup>2</sup>                      b) 70 cm<sup>2</sup>

c) 34 cm<sup>2</sup>                      d) 35 cm<sup>2</sup>

A B C D

One of the answers is correct, and three are incorrect. But crucially, the three incorrect answers have been chosen in such a way as to reveal the key misconception that the student may hold.

So, what can we learn from students' answers to this question?

- Answer A may suggest that the student believes that to calculate the area of a rectangle you add the two numbers together instead of multiplying them.
- Answer B is the correct answer.
- Answer C may imply that students are confusing the concepts of area and perimeter.
- Answer D could be the result of students being so used to being told that they need to times base by height and then divide by two when working out the area of a triangle that they now do the same for a rectangle.

### What Impact Can a Diagnostic Question Have?

A teacher using Diagnostic Questions will instantly gain a valuable insight into their students' thinking and can tailor their lessons accordingly.

A student using Diagnostic Questions will gain a greater understanding of common misconceptions and hopefully avoid them in the exam room.

## 100 Days to Maths GCSEs

Tuesday 13th February marks 100 days until GCSE Maths Paper One. To celebrate (!), we have a 100 day countdown of key questions on Diagnostic Questions.

Each day all Bridgewater Y11 students should log on to Diagnostic Questions - website or app – and they will receive two carefully chosen questions.

These questions will help Bridgewater students get daily practice across the full breadth of their GCSE maths course. They are carefully targeted for both Foundation and Higher papers so should be accessible for all students.

The answers to these questions will provide key insights into our students' strengths and weaknesses. This will enable our teachers to focus their teaching and revision practices for greater impact.

### What are the Next Steps?

If you want to know more about Diagnostic Questions, you can watch an explanatory video at:

[https://www.youtube.com/watch?v=Nlg\\_TXyFRmY](https://www.youtube.com/watch?v=Nlg_TXyFRmY)

If you want more details about Bridgewater's approach to using Diagnostic Questions you can email Mr Tench at [j.tench@bridgewaterhigh.com](mailto:j.tench@bridgewaterhigh.com)

You could encourage your child to download the app to their phone.

You should encourage your child to do both questions every day between now and the first GCSE maths exam.

QJT  
080218