

## Example Key Stage 4 Student Work - Mathematics

The following gives some examples of the level of work covered in Mathematics in Key Stage 4 including details of how we expect students to set out their work and engage with feedback received.

### Classwork and homework

Titles (and dates) are underlined

c.w. Straight line graphs 17.11.24

For any line, gradient = change in  $y \div$  change in  $x$

lg  $y = mx + c$

then  $m =$  gradient and  $c =$   $y$  intercept

1.  $y = 3x + 4$   $m = 3$   $c = 4$  ✓  
 $y = \frac{x}{2} - 5$   $m = \frac{1}{2}$   $c = -5$  ✓  
 $y = 2 - 3x$   $m = -3$   $c = 2$  ✓  
 $y = x$   $m = 1$   $c = 0$  ✓  
 $y = -2x - 7$   $m = -2$   $c = -7$  ✓  
 $y = 3x + 5$   $m = 3$   $c = 5$

2.  $y = -4x + 9$  ✓  
 $y = -3x - 2$  ✓  
 $y = \frac{3}{4}x - \frac{1}{2}$  ✓

A margin on every page which incorporates the question number plus CW or HW where relevant.

Key points are highlighted

The student has paid careful attention to the structure and clarity of their work.

Graphs have been drawn clearly in pencil and using a ruler. This is also important for Shape, Space and Measure and Data topics.

Teacher assessed work

Year 9 Number Consolidation (Review Task) – 30 minutes

Calculators are NOT allowed.

Topics:	Marks Available	Your score
RECALL Topics	5	3
Percentages	5	5
Mixed Numeracy Section: Factors, LCM and HCF Indices, Standard Form	12	10
Advanced	7	4
Structure & Clarity	1	1
<b>Total</b>	<b>30</b>	<b>23</b>

Students are expected to do their corrections for all tasks and then progress to the relevant "follow up" work.

(T1B) Rationalising the denominator  
(T\*) Challenge

Your overall percentage score: ..... %

**Recall topics:**

Give your answers fully simplified

1. A)  $18 \div 2\frac{3}{4} =$

$2\frac{3}{4} = \frac{11}{4}$

$\frac{72}{11} = 6\frac{6}{11}$

$\frac{18}{1} \times \frac{4}{1} = \frac{72}{11}$

~~✗~~

B) Simplify fully  $\frac{2}{3+\sqrt{3}}$

?

$\frac{2}{3+\sqrt{3}}$

$\frac{2}{3+\sqrt{3}} \times \frac{3-\sqrt{3}}{3-\sqrt{3}} = \frac{6-2\sqrt{3}}{6}$

$= \frac{3-2\sqrt{3}}{3}$

$6\frac{6}{11}$  [1]

Targets are either written out or numbered. A score is given. Students are expected to show their engagement with this target in their "follow up" work.

Structure and Clarity marks will be allocated in most assessed tasks. It is important that students set out their mathematical work clearly.

[2]

Surds

$$11) a) 1 + 3(2 + \sqrt{2}) = 1 + 6 + 3\sqrt{2} \\ = 7 + 3\sqrt{2} \quad \checkmark$$

$$b) (3 + \sqrt{2})(1 + \sqrt{2}) = 3 + 3\sqrt{2} + \sqrt{2} + 2 \\ = 5 + 4\sqrt{2} \quad \checkmark$$

$$c) \frac{5\sqrt{98}}{\sqrt{2}} = 5\sqrt{49} \\ = 5 \times 7 \\ = 35 \quad \checkmark$$

$$d) \frac{5}{\sqrt{2}+1} \quad \text{Rat}$$

$$\frac{5}{\sqrt{2}+1} \times \frac{\sqrt{2}-1}{\sqrt{2}-1} = \frac{5(\sqrt{2}-1)}{2-1} \\ = \frac{5\sqrt{2}-5}{1} \quad \checkmark$$

"Follow up" questions are complete according to targets following review tasks.

The "follow up" has been checked and marked by the student.

Advanced

$$4) 4(\sqrt[3]{4})^4 = 4 \times (\sqrt[3]{4})^3 \times \sqrt[3]{4} \\ = 4 \times 4 \times \sqrt[3]{4} \\ = 16\sqrt[3]{4} \quad \checkmark$$

Some students will be asked to do further extension or challenge tasks as part of their "follow up".