



Candidate Name	
Current School	

# Mathematics – Sample Assessment

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Middles (Year 10)

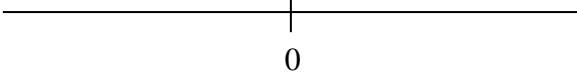
Time allowed: 50 minutes

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Please read this information before the examination starts

- ANSWER ALL QUESTIONS
  - Please write your solutions on the question paper and, where relevant, in the designated space.
  - CALCULATORS ARE NOT PERMITTED
  - Answers without supporting work/calculations will score zero
-

1	<p>Calculate</p> <p>(a) <math>367 \times 24</math> (b) <math>531 \div 9</math></p> <p style="text-align: right;">[2,2]</p>	Please leave blank
2	<p>Solve each of the following separately</p> <p><math>10a - 2 = 3</math>                      <math>4(2b - 5) = 15 - 2b</math></p> <p style="text-align: right;"><math>a = \underline{\hspace{2cm}}</math></p> <p style="text-align: right;"><math>b = \underline{\hspace{2cm}}</math></p> <p style="text-align: right;">[2,3]</p>	
3	<p>Find the value of</p> <p>(a) <math>2^4</math> (a) = <math>\underline{\hspace{2cm}}</math></p> <p>(b) <math>6^0</math> (b) = <math>\underline{\hspace{2cm}}</math></p> <p>(c) <math>3^{-1}</math> (c) = <math>\underline{\hspace{2cm}}</math></p> <p style="text-align: right;">[3]</p>	
4		Please leave

	<p>Simplify</p> <p>(a) <math>3(x+y) - 2(x-y)</math></p> <p>(b) <math>x(3x-4y) + 6y(x-3y)</math></p> <p style="text-align: right;">[2,4]</p>	<i>blank</i>
5	<p>Calculate</p> <p>(a) <math>\frac{5}{8} \times \frac{2}{15}</math></p> <p>(b) <math>\frac{7}{12} \div \frac{2}{9}</math></p> <p>(c) <math>\frac{5}{6} + \frac{2}{12} - \frac{1}{3}</math></p> <p style="text-align: right;">[2,2,3]</p>	
6	<p>Solve <math>x - 4 &lt; 3x + 8</math></p> <p>Show your solutions on the number line:</p> <div style="text-align: center;">  </div> <p style="text-align: right;">[3]</p>	
7	<p>Make <math>k</math> the subject of the formula <math>2h = \frac{3k-5}{6}</math></p>	<i>Please leave blank</i>

Make  $x$  the subject of the formula  $T = 2\pi\sqrt{\frac{x}{a}}$

[3,4]

8

Place the following in ascending order:

38%,  $\frac{2}{5}$ , 0.37,  $\frac{9}{25}$ , 39%

[3]

9

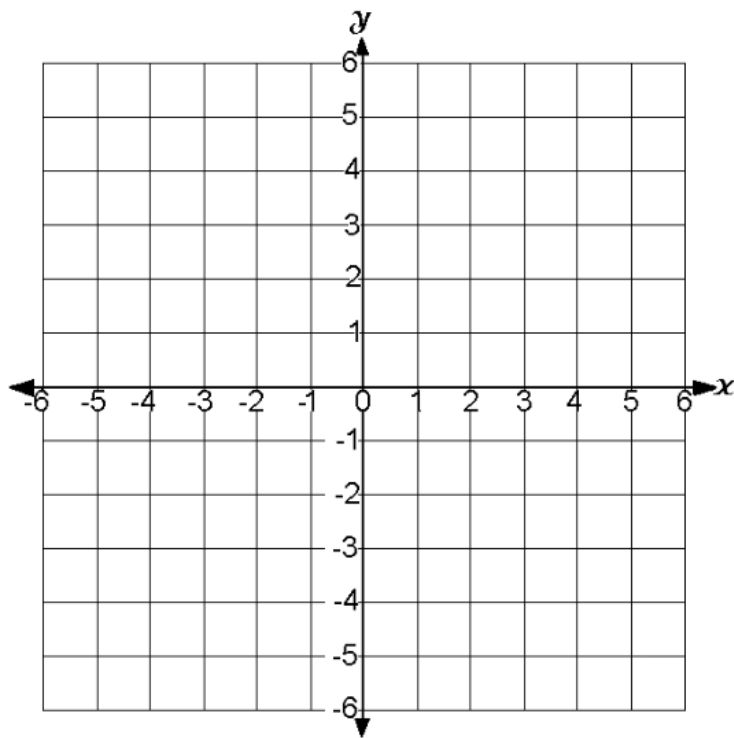
In a certain year, house prices fell by 10%. If after revaluation the house's new value is £135,000 what was it worth, to the nearest pound before the fall in prices?

£\_\_\_\_\_ to the nearest pound  
[3]

10

On the coordinate grid provided, draw the graphs represented by the equation  $y = -2x + 3$

*Please  
leave  
blank*



[3]

11

Factorise  $x^2 - 7x + 12$

[2]

12

Find the values of  $x$  and  $y$  satisfying the simultaneous equations:

$$4x + 6y = 50$$

$$3x + 2y = 30$$

$$x = \underline{\hspace{2cm}}$$

$$y = \underline{\hspace{2cm}}$$

[4]

The exam finishes with 5 questions that require thinking but no further mathematics curriculum to be covered