

REIGATE GRAMMAR SCHOOL

13+ Entrance Examination Exemplar
MATHEMATICS

Paper 2

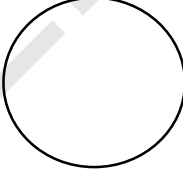
Time: 30 minutes Calculator

Name:

- Work through the paper carefully
- You do not have to finish everything
- Do not spend too much time on any single question
- Show any working in the spaces provided

Page	3	4	5	6	7	8	Total
Score							
Marks	7	5	7	7	9	7	40

SAMPLE

1.	<p>Given that:</p> $c = \frac{2b - 3a - 1}{ab^2}$ <p>Find c when $a = -5$ and $b = -2$.</p> <p>.....</p>	[3]
2.	<p>The area of a circle is 40cm^2.</p> <p>Find the circumference of the circle.</p> <p>Give your answer to 3 significant figures.</p>  <p>.....</p>	[4]

3.	<p>Harini invests £15 000 into a savings account, which accumulates interest at the following rate: 8% in the first year, 2.5% for all subsequent years.</p> <p>Work out the how much money Harini has in her savings account at the end of 7 years. Give your answer to the nearest penny.</p> <p>.....</p>	[3]
4.	<p>Amir buys a car for £8000 and later sells it at a loss for £5400. Calculate the percentage loss that Amir has made.</p> <p>.....</p>	[2]

5.	<p>A polygon has an interior angle that is five times larger than its exterior angle.</p> <p>How many sides does the polygon have?</p> <p>.....</p>	[4]
6.	<p>The perimeter of a triangle is 81cm.</p> <p>The lengths of the sides of the triangle are in the ratio 8 : 13 : 3</p> <p>Work out the length of the longest side of the triangle.</p> <p>Give your answer as a decimal showing all digits.</p> <p>.....</p>	[3]

7.	<p>Write the following numbers in standard form:</p> <p>(a) 81200</p> <p>..... [1]</p> <p>(b) 0.0351</p> <p>..... [1]</p> <p>Write the following numbers as ordinary numbers:</p> <p>(c) 3.21×10^5</p> <p>..... [1]</p> <p>(d) 2.043×10^{-6}</p> <p>..... [1]</p>	
8.	<p>Fully simplify the following:</p> $\frac{3xy \times 4x^2}{(3y^2)^2}$ <p>..... [3]</p>	

9.

Solve the following equations.

Give your answers as fully simplified fractions where appropriate.

(a) $4(3a - 2) = 36$

[2]

.....

(b) $3 - 6y = 2y + 1$

[3]

.....

(c) $-3(5 - 3x) = 2 - (2x + 5)$

[4]

.....

SAMPLE

(d) $\frac{1+5x}{3} = \frac{2x-1}{4}$

..... [4]

10. ABC is a right-angled triangle.

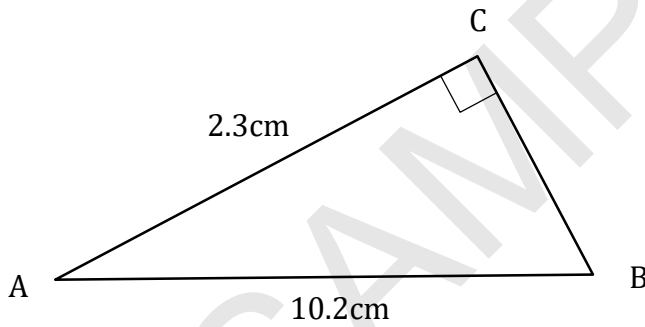


Diagram NOT accurately drawn

Calculate the length of BC.
Give your answer correct to **3 significant figures**

..... cm [3]

END OF TEST