

Name:

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# Target 5 GCSE Set 1 Paper 2



	Q	Topic	My Mark	Max Marks
Non Calculator	1	HCF and LCM		5
	2	Rounding, estimation and error intervals		5
	3	Standard form		5
	4	Angles with algebra		5
	5	Factorising and expanding quadratics		5
	6	Linear and Simultaneous equations		6
Calculator	7	Reverse percentages		3
	8	Pythagoras' Theorem and Trigonometry		6
	9	Direct and inverse proportion		6
	10	Speed Distance Time		7
				<b>53</b>

A Jagger

**Question 1 - Highest Common Factor and Lowest Common Multiple**

**(a)** Find the Highest Common Factor of 110 and 165.

.....  
**[3]**

**(b)** Work out the Lowest Common Multiple of 110 and 165.

.....  
**[2]**

**Question 2 - Rounding, estimation and error intervals**

(a) Estimate the value of

$$\frac{74.8 + 7.806}{0.539}$$

.....  
[3]

(b) The population of a small town is 18400, correct to the nearest 100.  
Write down the error interval for the population of the town.

.....  $\leq p <$  .....

[2]

**Question 3 - Standard form**

(a) Write  $0.023 \times 10^{-2}$  in correct standard form notation

.....  
[1]

(b) Work out  $(4.2 \times 10^8) \times (5 \times 10^{-6})$ .  
Write your answer in standard form.

.....  
[2]

(c) Work out  $(4.6 \times 10^4) + (2.4 \times 10^3)$ . Write your answer in standard form.

.....  
[2]

Question 4 - Angles with algebra

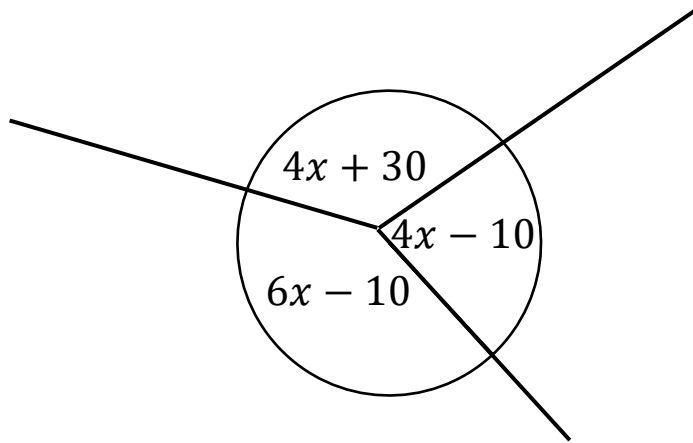


Diagram NOT drawn accurately

The diagram shows three angles that meet at a point.  
Find the size of each of the angles.

**Question 5 - Factorising and expanding quadratics**

(a) Expand  $(x - 7)(x - 8)$

.....  
[2]

(b) Factorise  $x^2 - 8x + 12$

.....  
[2]

(c) Use your answer to (b) to solve  $x^2 - 8x + 12 = 0$

$x = \dots\dots\dots$  or  $x = \dots\dots\dots$   
[1]

**Question 6 - Linear and Simultaneous equations**

(a) Solve  $\frac{x}{5} - 7 = -12$

$x = \dots\dots\dots$   
[2]

(b) Solve the simultaneous equations

$$2x + 3y = 30$$

$$3x - 5y = 7$$

$x = \dots\dots\dots$

$y = \dots\dots\dots$

**[4]**



**Calculator**

**Question 7 - Reverse percentages**

A jacket costs £55.25 in a 15% off sale. What was the pre-sale price?

$\dots\dots\dots$

**[3]**

**Question 8 - Pythagoras' Theorem and Trigonometry**

- (a) A circle has a diameter of 10cm. A square has side lengths of 6.9cm. Show that the square will fit inside the circle without touching the edge of the circle.

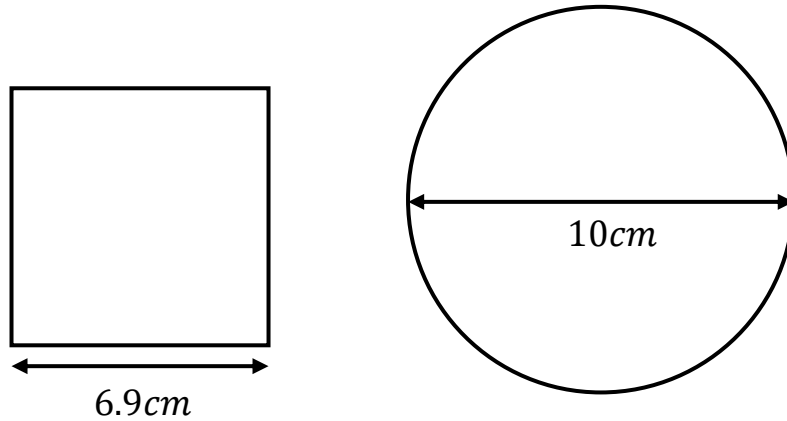


Diagram NOT drawn accurately

[3]

- (b) Calculate the size of the angle marked  $x$ . Give your answer to 3 significant figures.

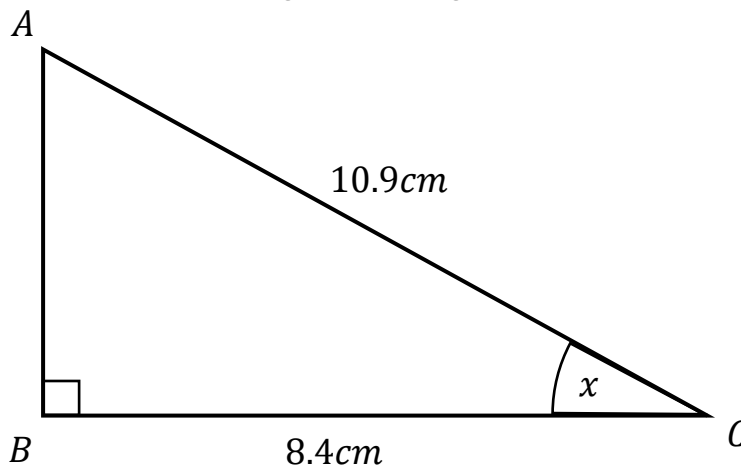


Diagram NOT drawn accurately

$x = \dots\dots\dots^{\circ}$   
[3]



**Question 9 - Direct and Inverse Proportion**

L is inversely proportional to Y.

When  $L = 8$ ,  $Y = 6$

**(a)** Write a formula for L in terms of Y.

.....  
[3]

**(b)** Calculate the value of L when  $Y = 4$

$L =$  .....  
[1]

**(c)** Calculate the value of Y when  $L = 24$

$Y =$  .....  
[2]

**Question 10 - Speed Distance Time**

- (a)** A car travels for 3 hours 15 minutes. Its average speed is 80 km/h.  
Work out the total distance the car travels.

.....km  
**[3]**

- (b)** Daniel leaves his house at 07 00.  
He drives 90 miles to work. He drives at an average speed of 36 miles per hour.  
At what time does Daniel arrive at work?

.....  
**[4]**