Top Ten

Name: .....

.....

Target 5 GCSE

Set 1

Paper 1

	Q	Topic	My Mark	Max Marks
Non Calculator	1	HCF and LCM		6
	2	Rounding, estimation and error intervals		5
	3	Standard form		6
	4	Angles with algebra		5
	5	Factorising and expanding quadratics		5
	6	Linear and Simultaneous equations		7
Calculator	7	Reverse percentages		3
	8	Pythagoras' Theorem and Trigonometry		4
	9	Direct and inverse proportion		4
	10	Speed Distance Time		5
				50

AJagger

Question 1 - Highest Common Factor and Lowest Common Multiple

(a) Write 720 as a product of its prime factors. Give your answer in index notation.

……

[3]

(b) George is organising a party.
He needs to by bread buns and burgers for the party.
Bread buns are sold in packs. Each pack contains 60 bread buns.
Burgers are sold in packs. Each pack contains 36 burgers.
George buys exactly the same numbers of bread buns as burgers.
What is the least number of each pack that George buys?

..... packs of bread buns

…..... packs of burgers

[3]

Question 2 - Rounding, estimation and error intervals

(a) Estimate the value of

$$\frac{\sqrt{83.4} + 30.67}{0.315}$$

……..

[3]

(b) The number of children at a primary school is 400, correct to 1 significant figure.
Write down the error interval for the number of children.

…..... ≤ n <…..

[2]

Question 3 - Standard form

(a) Write the following numbers in order of size. Start with the smallest number.

6200×10^{-4} 620 0.062×10^{2} 0.62×10^{-1}

……..

[2]

(b) **i.** Write 40 000 000 in standard form.

……..

[1]

ii. Write 3×10^{-5} as an ordinary number.

……..

[1]

iii. Work out the value of

$$3 \times 10^{-5} \times 40\,000\,000$$

Give your answer in standard form.

……..

[2]

Question 4 - Angles with algebra

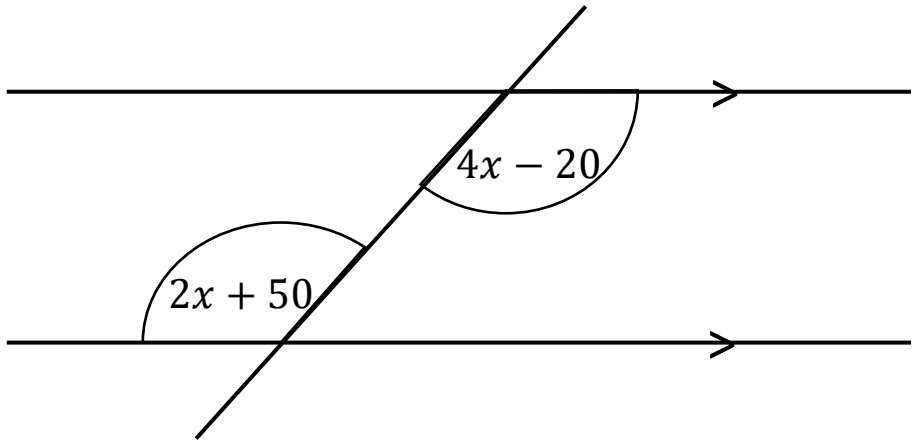

Diagram NOT drawn accurately

The diagram shows a pair of parallel lines.
Find the size of the angle $2x + 50$.

.....

[5]

Question 5 - Factorising and expanding quadratics

(a) Expand $(2x + 5)(x - 4)$

.....

[2]

(b) Factorise and solve $x^2 - 13x + 42 = 0$

$x =$..... **or** $x =$.....

[3]

Question 6 - Linear and Simultaneous equations

(a) Solve $8x + 14 = 5x + 8$

$x =$.....

[3]

(b) Solve the simultaneous equations

$$6x + 8y = 41$$
$$10x + 3y = 27$$

$x =$.....

$y =$.....

[4]

Calculator

Question 7 - Reverse percentages

The price of all rail season tickets increased by 6%.
After the increase, the price of a rail season ticket from Sheffield to Leeds was £2883.20
Work out the price before this increase.

.....

[3]

Question 8 - Pythagoras' Theorem and Trigonometry

The diagram shows a quadrilateral ABCD.

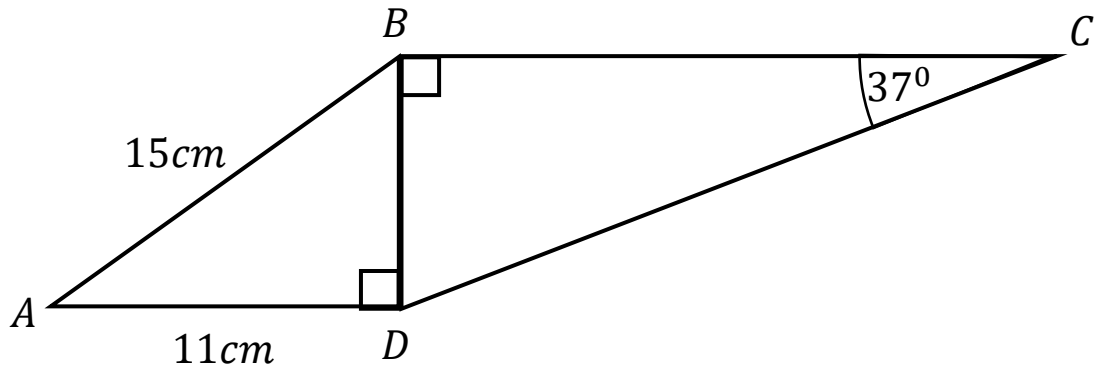

Diagram NOT drawn accurately

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

…….. cm
[4]

Question 9 - Direct and Inverse Proportion

W is directly proportional to p^2.
W = 900 when p = 20

Write a formula for W in terms of p and use your formula to calculate the value of W when p = 25.

W = ……

[4]

Question 10 - Speed Distance Time

(a) Yasmin completes a journey in two stages.
In stage 1 of her journey, she drives at an average speed of 80 km/h and takes 1 hour 45 minutes.

How far does Yasmin travel in stage 1 of her journey?

..... km
[2]

(b) Altogether, Yasmin drives 190 km and takes a total time of 2 hours 15 minutes.
What is her average speed, in km/h, of her entire journey?

..... km/h
[3]