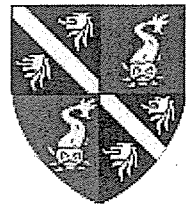


Wallasey School Review Day

Year 11 Mathematics Work



Name _____ Set _____ Teacher _____

Edexcel GCSE

Mathematics (Linear)

Paper 3 (Non-Calculator)

Higher Tier

Mock Paper



Time: 1 hour 45 minutes

Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers

Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature. Check that you have the correct question paper.

Answer ALL the questions. Write your answers in the spaces provided in this question paper.

You must NOT write on the formulae page. Anything you write on the formulae page will gain NO credit.

If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2).

There are 26 questions in this question paper. The total mark for this paper is 100.

There are 24 pages in this question paper. Any blank pages are indicated.

Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.

Work steadily through the paper. Do not spend too long on one question.

If you cannot answer a question, leave it and attempt the next one.

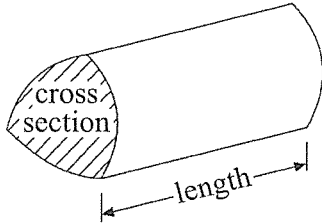
Return at the end to those you have left out.

GCSE Mathematics (Linear)

Formulae: Higher Tier

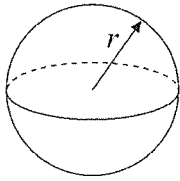
You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.

Volume of a prism = area of cross section \times length



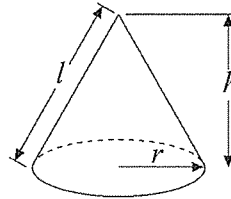
Volume of sphere = $\frac{4}{3}\pi r^3$

Surface area of sphere = $4\pi r^2$

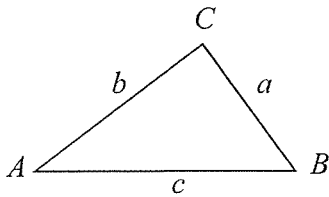


Volume of cone = $\frac{1}{3}\pi r^2 h$

Curved surface area of cone = $\pi r l$



In any triangle ABC



The Quadratic Equation

The solutions of $ax^2 + bx + c = 0$

where $a \neq 0$, are given by

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Sine Rule $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Cosine Rule $a^2 = b^2 + c^2 - 2bc \cos A$

Area of triangle = $\frac{1}{2} ab \sin C$



Answer ALL TWENTY SIX questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. (a) Work out an estimate for $\frac{19.4 \times 31.3}{8.1 \times 4.9}$

.....
(2)

- (b) Use your answer to part (a) to find an estimate for $\frac{194 \times 3130}{81 \times 49}$

.....
(1)

(Total 3 marks)

Q1

2. The price of the TV was £80
The price increases by 15%.

Work out the new price of the TV.

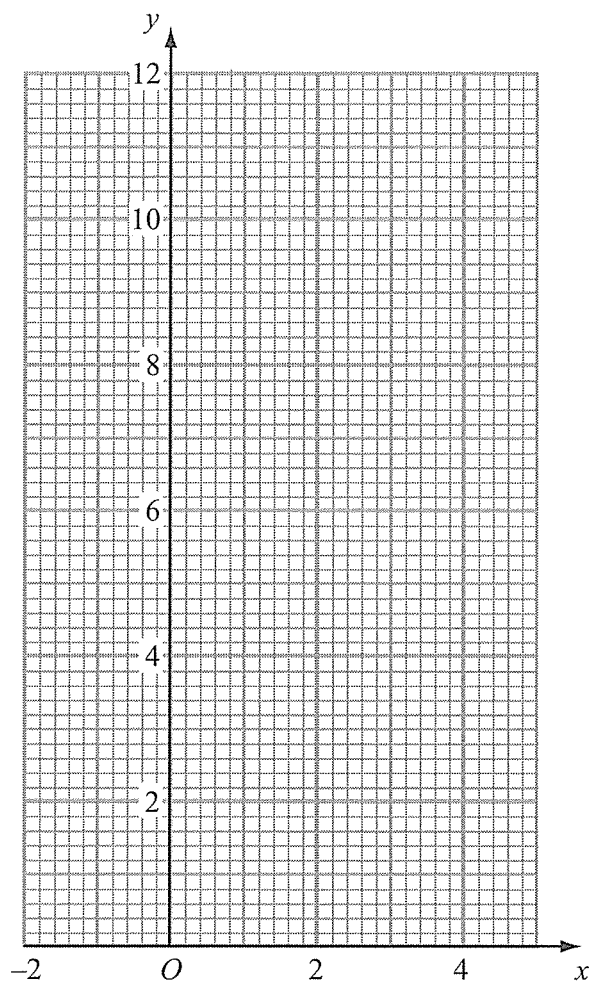
£

(Total 3 marks)

Q2



3. Draw the graph of $y = 10 - 2x$ for values of x from -1 to 4 .



Q3

(Total 3 marks)



4.

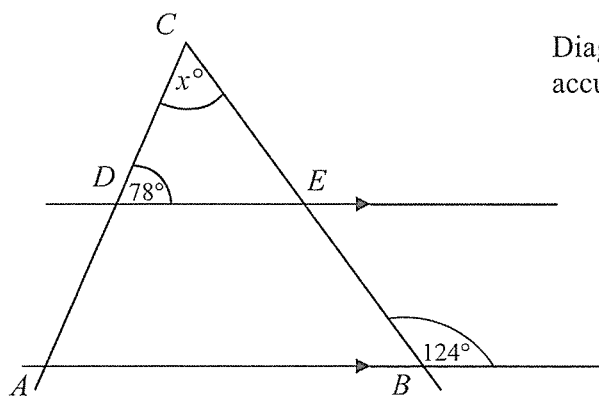


Diagram NOT accurately drawn

ABC is a triangle.
 DE is a straight line parallel to AB .

Work out the value of x .

.....
 (2)

Give reasons for your answer.

.....

 (1)

(Total 3 marks)

Q4



N 3 3 8 5 1 A 0 5 2 4

5.

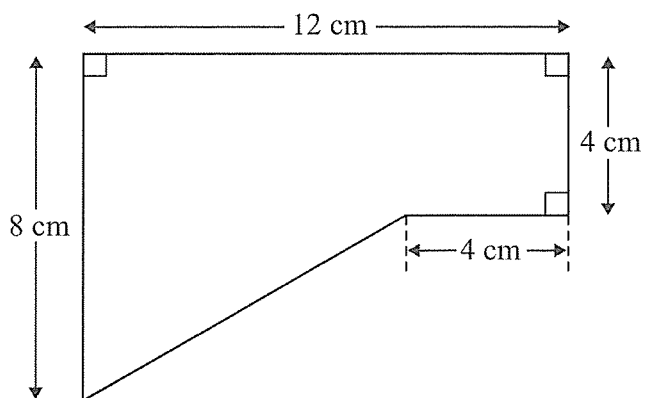


Diagram NOT accurately drawn

Work out the area of this shape.

..... cm²

(Total 4 marks)

Q5



6. Jane measured the lengths, in centimetres, of 15 leaves.

8.4 7.6 6.2 5.8 7.6 7.9 8.1 7.9 4.3 5.2
 6.3 6.5 8.2 4.6 7.3

Put this information into an ordered stem and leaf diagram.

You must include a key.

Q6

(Total 3 marks)

7. There are 1500 students in a school.

60% of the students are male.
 30% of the male students like tennis.
 40% of the female students like tennis.

How many students in the school like tennis?

Q7

(Total 4 marks)



8. (a) Expand and simplify $(q + 4)(q + 5)$

.....
(2)

(b) Expand and simplify $(2k - 3m)(3k + 2m)$

.....
(2)

(Total 4 marks)

Q8

9. Solve $5(x + 1) = 3x + 12$

$x =$

(Total 3 marks)

Q9

