Centre No.						Paper Reference							Surname	Initial(s)
Candidate No.						1	3	8	0	/	4	H	Signature	

Paper Reference(s)

1380/4H

Edexcel GCSE

Mathematics (Linear) – 1380

Paper 4 (Calculator)

Examiner's use only

Team Leader's use only

Example

Past Paper Questions

Arranged by Topic

Model Answers

Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator. 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 may be used.
If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

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.

N 3 4 7 3 1 A 0 1 2 4

Turn over

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Leave blank

2. Here is a right-angled triangle.

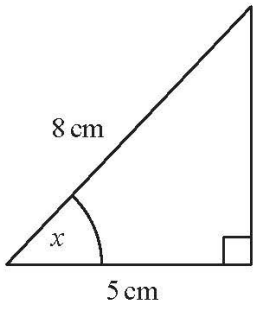


Diagram **NOT** accurately drawn

(a) Calculate the size of the angle marked x.
Give your answer correct to 1 decimal place.

$$\cos = \frac{\text{Adjacent}}{\text{Hypotenuse}}$$

$$\cos x = \frac{5}{8}$$

$$x = 51.3178$$

$x =$ 51.3 °

(3)

Here is another right-angled triangle.

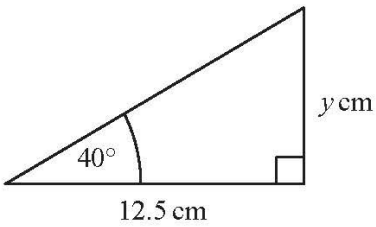


Diagram **NOT** accurately drawn

(b) Calculate the value of y.
Give your answer correct to 1 decimal place.

$$\tan = \frac{\text{Opposite}}{\text{Adjacent}}$$

$$\tan 40^\circ = \frac{y}{12.5}$$

$$y = 12.5 \tan 40^\circ$$

$$y = 10.488$$

$y =$ 10.5

(3)

Q2

(Total 6 marks)

Leave blank

3.

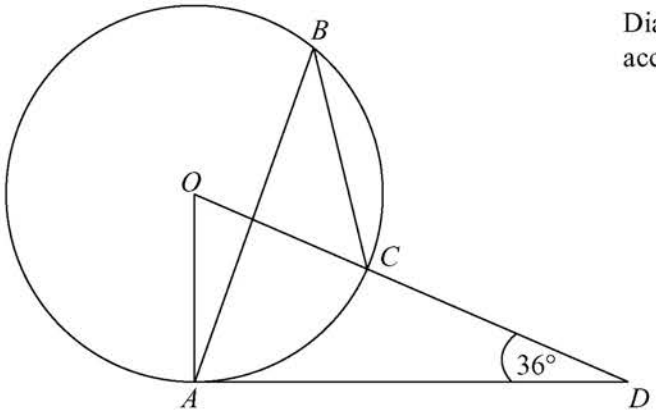


Diagram **NOT** accurately drawn

The diagram shows a circle centre O.
A, B and C are points on the circumference.

DCO is a straight line.
DA is a tangent to the circle.

Angle $ADO = 36°$

(a) Work out the size of angle AOD.

Angle DAO=90° (The angle between a tangent and the radius drawn to the point of contact is 90°)

Angle AOD is 180°-90°-36° =54° (Angles in a triangle add up to 180°)

54 °

(2)

(b) (i) Work out the size of angle ABC.

54° ÷ 2=27°

27 °

(ii) Give a reason for your answer.

Angle ABC is half of angle AOD (The angle subtended at the centre of a circle is twice the angle subtended at the circumference)

(3)

(Total 5 marks)

Q3

Leave blank

1.

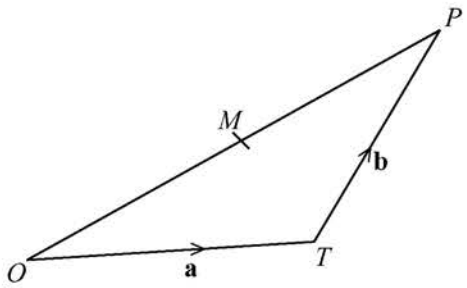


Diagram **NOT** accurately drawn

OPT is a triangle.
M is the midpoint of *OP*.

$\overrightarrow{OT} = \mathbf{a}$

$\overrightarrow{TP} = \mathbf{b}$

(a) Express $\overrightarrow{OM}$ in terms of **a** and **b**.

$\overrightarrow{OP} = \overrightarrow{OT} + \overrightarrow{TP}$

$\overrightarrow{OP} = a + b$

$\overrightarrow{OM} = \frac{1}{2}\overrightarrow{OP}$

$\overrightarrow{OM} = \frac{1}{2}(a + b)$

$\overrightarrow{OM} =$ $\frac{1}{2}(a + b)$

(2)

(b) Express $\overrightarrow{TM}$ in terms of **a** and **b**.
Give your answer in its simplest form.

$\overrightarrow{TM} = \overrightarrow{TO} + \overrightarrow{OM}$

$= -a + \frac{1}{2}(a = b)$

$= -a + \frac{1}{2}a + \frac{1}{2}b$

$= -\frac{1}{2}a + \frac{1}{2}b$

$\overrightarrow{TM} =$ ½ (**b** - **a**)

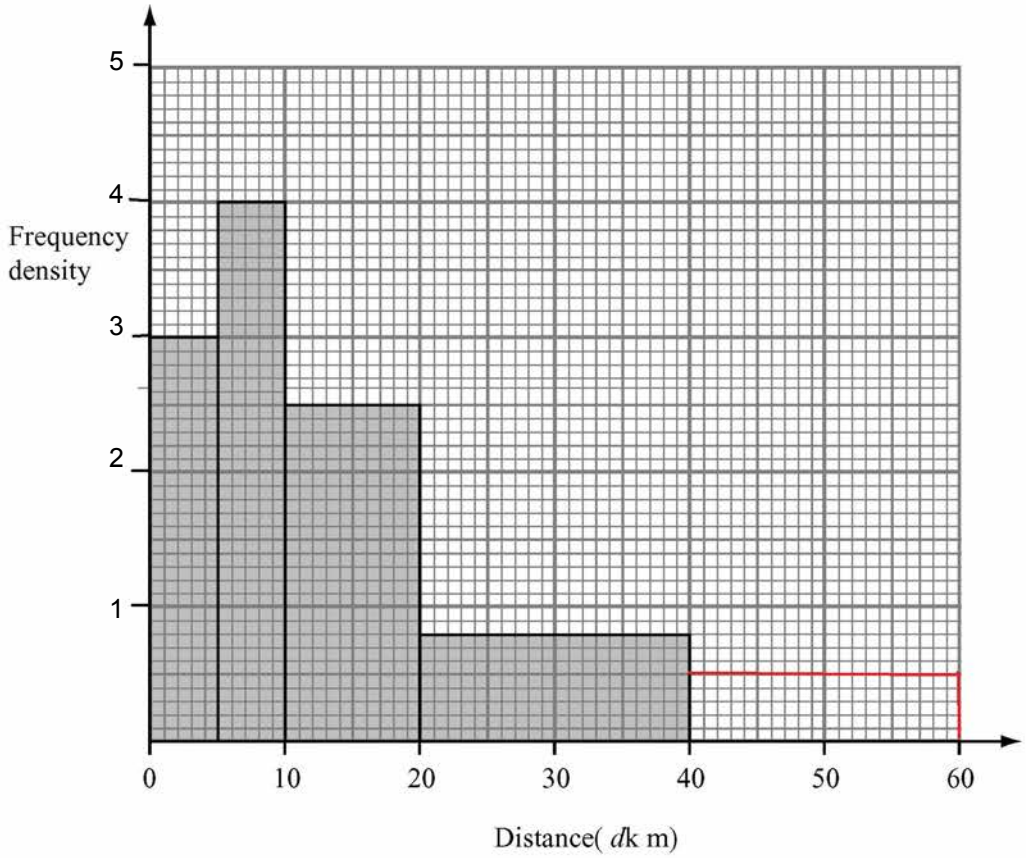
(2)

(Total 4 marks)

Q1

Leave blank

4. The incomplete histogram and table give some information about the distances some teachers travel to school.



(a) Use the information in the histogram to complete the frequency table.

Distance (d km)	Frequency	Frequency Density
$0 < d \leqslant 5$	15	3
$5 < d \leqslant 10$	20	4
$10 < d \leqslant 20$	25	2.5
$20 < d \leqslant 40$	16	0.8
$40 < d \leqslant 60$	10	0.5

(2)

(b) Use the information in the table to complete the histogram.

(1)

Q4

(Total 3 marks)

Leave blank

3. A concert ticket costs £45 plus a booking charge of 15%.

Work out the total cost of a concert ticket.

$\frac{45}{1} \times \frac{15}{100}$

$\frac{27}{4} = 6\frac{3}{4} = 6.75$

45 + 6.75 = £51.75

£ 51.75 **Q3**

(Total 3 marks)

4. A shop sells CDs and DVDs.
In one week the number of CDs sold and the number of DVDs sold were in the ratio 3:5
The total number of CDs and DVDs sold in the week was 728

Work out the number of CDs sold.

3 : 5 means there are 3 + 5 shares

728 ÷ 8 = 91

91 x 3 = 273

273 CDs **Q4**

(Total 2 marks)