Write your name here

Surname	Other names

Grade One and Two Paper
Level 1 / Level 2
GCSE (9–1)

Centre Number | | | | | |

Candidate Number | | | | |

Mathematics Paper E

Grade One, Two and Three

Wednesday Form Plus Maths Lesson
Time: 2 hours 30 minutes

Paper Reference
Grade 1-3

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Total Marks
112

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- **Calculators may not be used.**

Information

- The total mark for this paper is 150
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

1 Write down the value of the 8 in the number 2781

80

(1)

2 Write down the value of the 4 in the number 48193

40,000

(1)

3 Write down the value of the 6 in the number 83916

6

(1)

4 Write down the value of the 2 in the number 2493

2000

(1)

5 Write down the value of the 9 in the number 82953

900

(1)

6 Write down the value of the 4 in the number 8492

400

(1)

7 Write down the value of the 3 in the number 1893

3

(1)

8 Work out $\frac{3}{5}$ of 85

$\frac{3}{5_1} \times \frac{\overset{17}{\cancel{85}}}{1} = 51$

(1)

9 Work out $\frac{1}{8}$ of 96

$\frac{1}{8} \times \frac{96}{1} = 12$

(1)

10 Work out $\frac{1}{6}$ of 114

$\frac{1}{\cancel{6}_1} \times \frac{\overset{19}{\cancel{114}}}{1} = 19$

(1)

11 Work out $\frac{4}{7}$ of 154

$\frac{4}{7_1} \times \frac{\overset{22}{\cancel{154}}}{1} = 88$

(1)

12 Write down all the factors of 24

1 x 24, 2 x 12, 3 x 8, 4 x 6

1, 2, 3, 4, 6, 8, 12, 24

(2)

13 Write down all the factors of 85

1 x 85 5 x 17

1, 5, 17, 85

(2)

14 Write down all the factors of 68

1 x 68 2 x 34 4 x 17

1, 2, 4, 17, 34, 68

(2)

15 Write down all the factors of 51

1 x 51 3 x 17

1, 3, 17, 51

(2)

16 Write down all the factors of 39

1 x 39 3 x 13

1, 3, 13, 39

(2)

17 Put the following numbers in order

-5 7 -2 4 8

-5, -2, 4, 7, 8

(2)

18 Put the following numbers in order

-5 3 9 -7 8

-7 -5 3 8 9

(2)

19 Put the following numbers in order

2 -7 -2 6 -1

-7 -2 -1 2 6

(2)

20 Put the following numbers in order

2 4 -7 -8 6

-8 -7 2 4 6

(2)

21 Find the value of $\sqrt{3636}$

60.29925373

(1)

21 Find the value of $\sqrt{64.36}$

8.022468448

(1)

21 Find the value of $\sqrt{1.44}$

1.2

(1)

21 Find the value of $\sqrt{0.0144}$

0.12

(1)

22 (a) Solve $x + x + x + x + x = 30$

$5x = 30$

x= 6 (1)

(b) Solve $3x + 5x + x + 3x + x = 52$

$13x = 52$

$x = 4$

x= 4 (1)

(c) Solve $6x + x + 5x + 3x + 4x = 95$

$19x = 95$

x= 5 (1)

23 (a) Solve $y - 12 = 8$

$+2(\quad) +12$

$y = 20$

y= 20 (1)

(b) Solve $2y + 4 = 28$

$-4(\quad) -4$

$2y = 24$

$\div 2(\quad) \div 2$

$y = 12$

y= 12 (1)

(c) Solve $4y - 4 + y = 39$

$+4(\quad) +4$

$5y - 4 = 39$

$5y = 43$

$\div 5(\quad) \div 5$

$y = 8\frac{3}{5}$

y= $8\frac{3}{5}$ (1)

24 (a) Solve $\frac{t}{3} = 30$

$\times 3 \left(\quad \right) \times 3$

$t = 90$

t= 90 .....

(1)

(b) Solve $\frac{2t}{3} = 60$

$\times 3 \left(\quad \right) \times 3$

$2t = 180$

$\div 2 \left(\quad \right) \div 2$

$t = 90$

t= 90 .....

(1)

(c) Solve $\frac{5t}{4} = 80$

$\times 4 \left(\quad \right) \times 4$

$5t = 320$

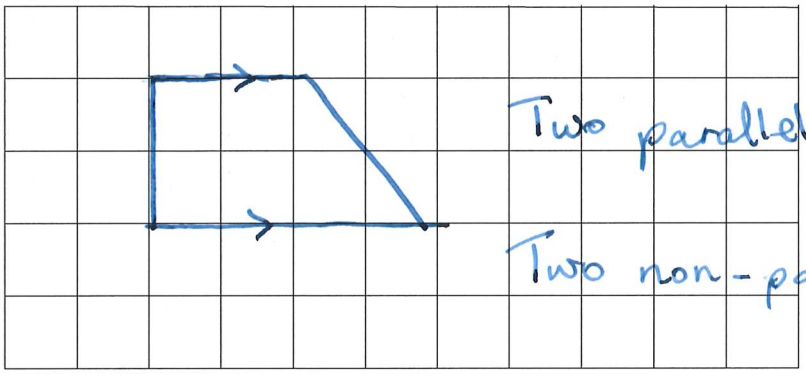
$\div 5 \left(\quad \right) \div 5$

$t = 64$

t= 64 .....

(1)

25 On the grid below, draw a trapezium.

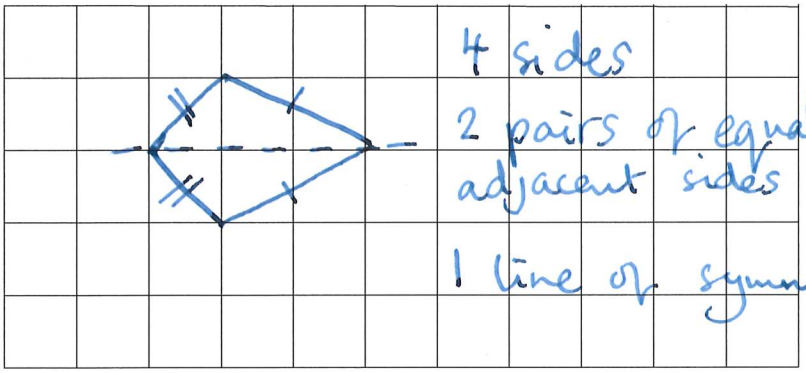


Two parallel sides

Two non-parallel sides

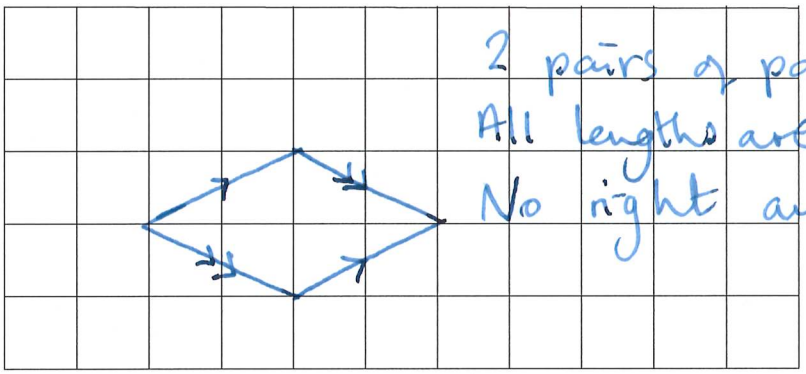
(1)

26 On the grid below, draw a kite.



(1)

27 On the grid below, draw a rhombus.



(1)

28 Liam organises a party for some friends. Here is a list of the things that he needed to buy.

Item	Quantity	Cost of each item	Total cost
Coke	6 bottles	£1.65	£9.90
Lemonade	5 bottles	£1.75	£ 8·75
Party Food Packs	8 packs	£ 12·02	£96.16
		Delivery Charge	£16.87
		Total Cost	£ 131·68

(3)

29 160 people attend a meeting.

$\frac{3}{5}$ of the people that attend a meeting are men.

35% of the men that attend the meeting come from Scotland.

The rest of the people come from England.

45% of the people from England are men.

How many people who attend the meeting are women?

64

	Scotland	England	Total
Men	~~33 3/5~~ 34	~~62~~	96
Women		~~28~~	64
Total			160

$\frac{3}{5} \times 160 = 96$

160 − 96

$\frac{7}{\cancel{35}} \times \frac{24}{\cancel{96}} = \frac{168}{5}$

$\cancel{100}$

$\cancel{25}$

5

$= 33\frac{3}{5}$

(5)

30 240 people get on a ferry.

$\frac{4}{5}$ of the people on the Ferry are from the UK. The rest are from France.

25% of the people from France are women.

55% of the people from the UK are women.

How many people on the Ferry are men?

$240 \times \frac{4}{5} = 192$ from U.K.

$240 - 192 = 48$ from France

$100 - 25 = 75\%$ men from France

$\frac{75}{100} \times \frac{48}{1} = 36$ men from France

$192 \times \frac{45}{100} = 86.4 \approx 86$

$86 + 36 = 122$ men on the Ferry.

(5)

31 500 people went to watch Rothwell play at rugby.

$\frac{3}{5}$ of the people were adults. The rest of the people were children.

35% of the adults supported Rothwell.

65% of the children supported Rothwell.

How many people supported the other team?

$500 \times \frac{3}{5} = 300$

$35\% \times 300 = 105$ supported Rothwell (adults)

$300 - 105 = 195$ adults supported the other team.

$500 - 300 = 200$ children.

$65\% \times 200 = 130$ children supported Rothwell.

$200 - 130 = 70$ children supported the other team

$195 + 70 = 265$ people supported the other team.

265

(5)

32 Alfie works in a butcher's shop.

From Monday to Friday, he is paid his normal wage which is £9.20 per hour.

On Saturday, Alfie's rate of pay is $1\frac{1}{4}$ times his normal rate of pay.

On Sunday, Alfie's wage is increased by 60%.

The table below shows Alfie's hours for four separate weeks.

How much was Alfie paid each week?

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	5	6	5	4	6	3	6
2	5	4	4	0	3	5	6
3	6	6	6	6	6	0	0
4	4	5	6	6	6	6	6

Week 1

$9.20(5+6+5+4+6) + (3 \times \frac{5}{4} \times 9.2)$

$+ (6 \times 9.2 \times 1.6) = 9.20(26) + 34.5 + 88.32$

$= 239.20 + 34.5 + 88.32$

$= £362.02$

Week 2 $9.20(5+4+4+0+3) + (5 \times 1.25 \times 9.2) + (6 \times 9.2 \times 1.6)$

$= 147.20 + 57.50 + 88.32 = £293.02$

Week 3 $9.20(5 \times 6) = £276$

Week 4 $9.20(4+5+6+6+6) = 9.20(27) = £248.40$

$6 \times 1.25 \times 9.20 = £69$

$6 \times 1.6 \times 9.20 = £88.32$

362.02

£ ~~1336.76~~

$248.40 + 69 + 88.32 = 405.72$ (4)

Total Amount $= 362.02 + 293.02 + 276 + 405.72$

$= 1336.76$

Week 2

See first sheet

£ 293.02

(4)

Week 3

See first sheet

£ 276.00

(4)

See first sheet

£ 405.72

(4)

33 The table below shows information about the ages of a group of people in a rugby club.

Age (years)	Frequency
12	17
13	15
14	16
15	17
16	21

af
12 × 17 = 204
13 × 15 = 195
14 × 16 = 224
15 × 17 = 255
16 × 21 = 336

Work out the mean average age of the people in the rugby club. Give your answer correct to two decimal places.

Mean $\bar{x} = \frac{\Sigma af}{\Sigma f} = \frac{204 + 195 + 224 + 255 + 336}{17 + 15 + 16 + 17 + 21}$

$= \frac{1214}{86}$

$= 14\frac{10}{86}$

$= 14\frac{5}{43}$

$\approx$ 14yrs and 42 days old.

$\frac{365}{43} \approx 8.49$

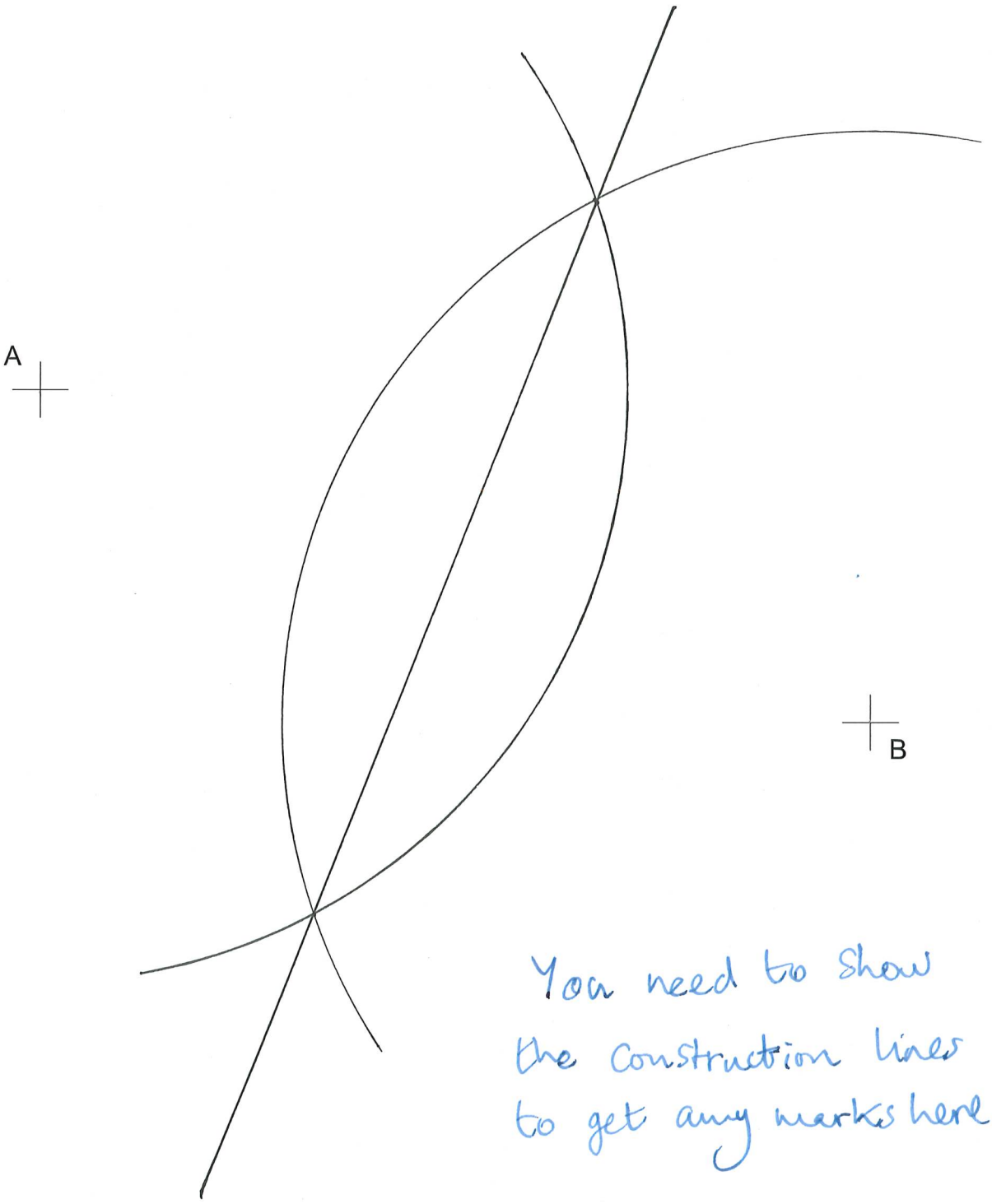
$8.49 \times 5 = 42.44186047$

Need this

.....

(3)

34 Two points are shown below. Construct a line that shows the points that are exactly half way between the two points. You must show your construction lines.

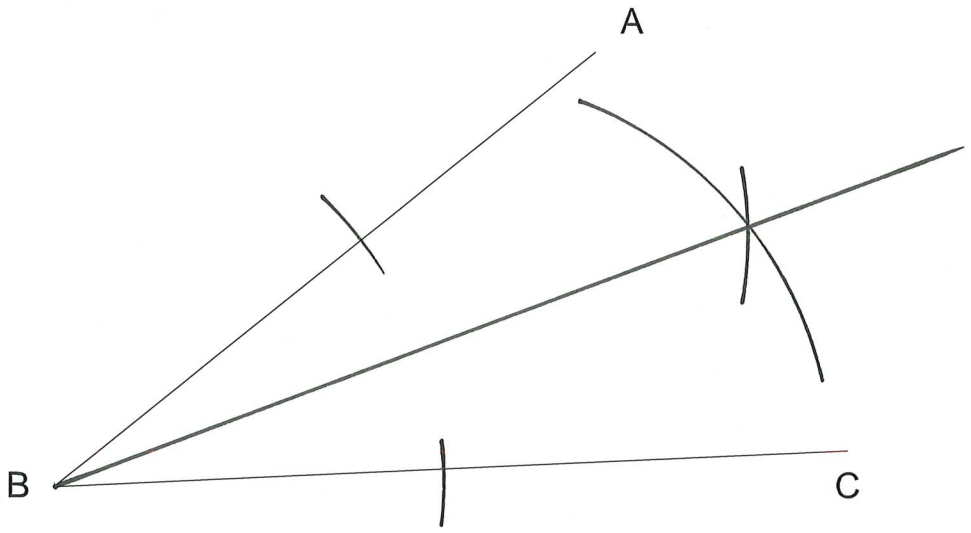


You need to show the construction lines to get any marks here.

(3)

35 Use your compass and ruler to construct the bisector of angle ABC.

You must show your construction lines.



(3)

36 Millie put £3000 in a bank account where she left it for 6 years. The account paid 3.4% compound interest. How much interest did Millie earn?

$CI = PR^T$

$= 3000 \times 1.06^6$

$= 4255.557337$

Interest = 4255.56 − 3000.00 = 1255.56

£1255.56

(3)

37 Lewis put £4500 in a bank account. He left it there for four years. The account paid 2.7% interest. How much interest did Lewis earn?

$CI = PR^T$

$= 4500 \times 1.027^4$

$= 5006.039685$

Interest = 5006.04 − 4500.00 = 506.04

£506.04

(3)

38 Rosa put £6000 in a bank account. She left it there for seven years. The account paid 3.4% percent compound interest. How much interest did Rosa earn?

$CI = PR^T$

$= 6000 \times 1.034^7$

$= 7582.196261$

Interest $= 7582.20 - 6000$

$= 1582.20$

£1582.20

(3)

39 Tanya put £7500 in a bank account. She left it there for nine years. The account paid 6.2% compound interest. How much interest did Tanya earn?

$CI = PR^T$

$= 7500 \times 1.062^9$

$= 12887.89277$

Interest $= 12887.89 - 7500.00$

$= 5387.89$

£5387.89

(3)

40 Kayden put £5938 in a bank account. He left it there for five years. The account paid 2.95% compound interest. How much interest did Kayden earn?

$CI = PR^T$

$= 5938 \times 1.0295^5$

$= 6867.077489$

Interest $= 6867.08 - 5938$

$= 929.08$

£929.08

(3)

41 Chelsey scored 38 out of 45 in a test. What percentage did she score?

$\frac{38}{45} \times 100 = 84.\dot{4}$

$84.\dot{4}$ %

(1)

41 Josh scored 63 out of 75 in a test. What percentage did he score?

$\frac{63}{75} \times \frac{100}{1} = 84$

84 %

(1)

41 David scored 82 out of 120 in a test. What percentage did he score?

$\frac{82}{120} \times \frac{100}{1} = \frac{205}{3} = 68\frac{1}{3}$

$68\frac{1}{3}$ %

(1)

41 Ellie scored 67 out of 80 in a test. What percentage did she score?

$\frac{67}{80} \times 100 = 83.75$

83.75 %

(1)

41 Rowan scored 43 out of 60 in a test. What percentage did he score?

$\frac{43}{60} \times 100 = 71\frac{2}{3}$

$71\frac{2}{3}$ %

(1)

42 Lucy scored 115 out of 130 in a test. What percentage did she score?

$\frac{115}{130} \times 100 = 88.46153846$

88.46153846 %

(1)