



Chigwell School

13+ Specimen Paper

Maths

45 Minutes

Full name.....

Current School.....

Instructions:

Answer **ALL** questions.

Correct answers without sufficient working may not be awarded full marks.

Calculators may **NOT** be used.

The total marks available for this paper is **50**

The marks for each question are shown in brackets – *use this as a guide to how much time to spend on each question.*

There are **15** questions.

Q1.

(a) Simplify $t + t + t$

.....
(1)

(b) Simplify $5 \times e \times f$

.....
(1)

(c) Simplify $3x + 8y + x - 2y$

.....
(2)

(Total for question = 4 marks)

Q2.

Samina recorded the maximum temperature and the minimum temperature on each of six days in January. The table shows her results.

	Mon	Tues	Wed	Thurs	Fri	Sat
Maximum temperature	1 °C	3 °C	2 °C	0 °C	3 °C	4 °C
Minimum temperature	- 4 °C	-2 °C	- 4 °C	-5 °C	-3 °C	-2 °C

(a) Write down the lowest temperature.

..... °C
(1)

(b) Work out the difference between the maximum temperature on Wednesday and the minimum temperature on Wednesday.

..... °C
(1)

The minimum temperature on Sunday was 5 °C higher than the minimum temperature on Saturday.

(c) Work out the minimum temperature on Sunday.

..... °C
(1)

(Total for Question is 3 marks)

Q3.

(a) Work out 30% of 60

.....
(2)

(b) Work out $-15 \div -3$

.....
(1)

(c) Work out the value of $4 + 3 \times (9 - 2)$

.....
(1)

(Total for question = 4 marks)

Q4.

Write these numbers in order of size.
Start with the smallest number.

$\frac{3}{7}$ 41% 0.45 $\frac{2}{5}$ 0.405

.....
(Total for question = 2 marks)

Q5.

(a) Work out $1\frac{3}{4} + 3\frac{1}{2}$

.....
(1)

(b) Work out $\frac{3}{7} \times £28$

£.....
(2)

(c) **Estimate** the value of 19.89×201.71

.....
(2)

(Total for question = 5 marks)

Q6.

$a = 4$
 $b = -5$

(a) Work out the value of $2a + 3b$

.....
(2)

$x = 3$

(b) Work out the value of $4x^2$

.....
(1)

(Total for question = 3 marks)

Q7.

Ali, Ben and Candice share £300 in the ratio 2 : 3 : 5

How much money does Candice get?

£

(Total for Question is 2 marks)

Q8.

The timetable shows the times of trains between Fratton and Portsmouth Harbour.

Fratton	21 55	21 58	22 08	22 19
Southsea	21 58	22 02	22 11	22 22
Portsmouth Harbour	22 02	22 05	22 16	22 26

John is going to travel by train from Fratton to Portsmouth Harbour to catch a ferry.

The last ferry of the day leaves at 2215

John must allow 8 minutes to get from the train to the ferry.

What is the time of the latest train from Fratton that John can catch?

.....
(Total for question = 2 marks)

Q9.

(a) Solve $5x = 45$

$x = \dots\dots\dots$
(1)

(b) Solve $w - 8 = 20$

$w = \dots\dots\dots$
(1)

(c) Solve $\frac{t}{7} = 5$

$t = \dots\dots\dots$
(1)

(d) Solve $4x - 9 = 41$

$x = \dots\dots\dots$
(2)

(Total for Question is 5 marks)

Q10.

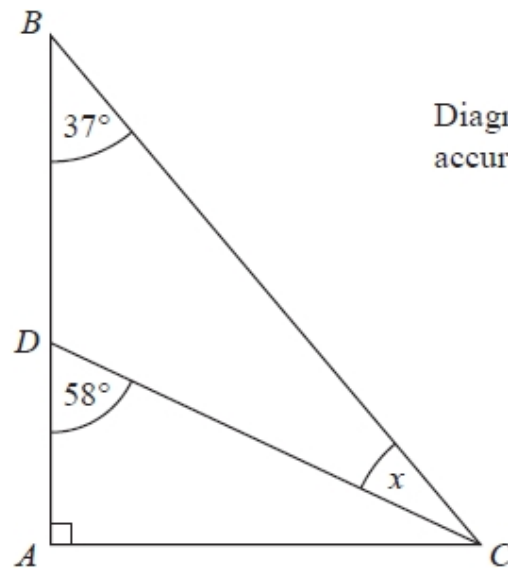


Diagram **NOT**
accurately drawn

ABC is a right-angled triangle.
 ADB is a straight line.

Work out the size of the angle marked x .

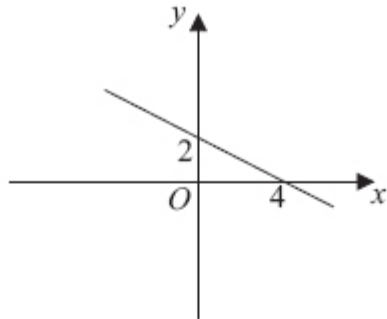
.....^o

(Total for question = 2 marks)

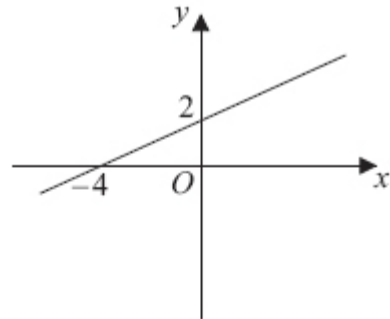
Q11.

Here are the graphs of 6 straight lines.

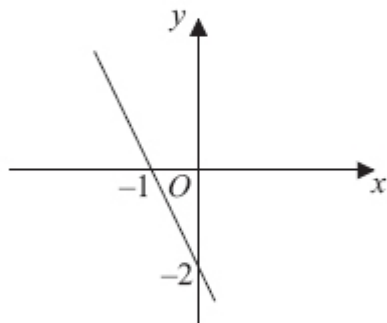
Graph A



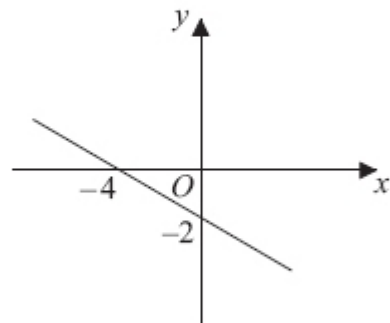
Graph B



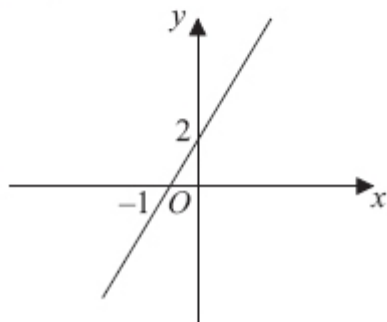
Graph C



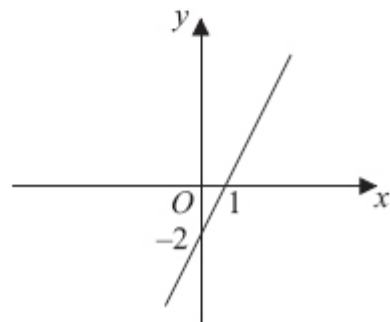
Graph D



Graph E



Graph F



Match each of the graphs **A**, **B**, **C**, **D**, **E** and **F** to the equations in the table.

Equation	$y = \frac{1}{2}x + 2$	$y = 2x - 2$	$y = -\frac{1}{2}x + 2$	$y = -2x - 2$	$y = 2x + 2$	$y = -\frac{1}{2}x - 2$
Graph						

(Total for Question is 3 marks)

Q12.

Celina and Zoe both sing in a band.

One evening the band plays for 80 minutes.
Celina sings for 65% of the 80 minutes.

Zoe sings for $\frac{5}{8}$ of the 80 minutes.

Celina sings for more minutes than Zoe sings.

Work out for how many more minutes.
You must show all your working.

..... minutes

(Total for question = 4 marks)

Q13.

The diagram shows a path around a pond.

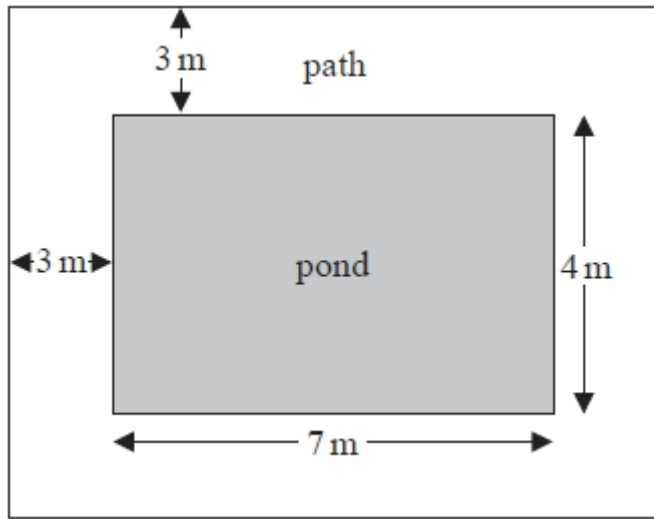


Diagram **NOT**
accurately drawn

The pond is in the shape of a rectangle with length 7 m and width 4 m.
The path is 3 m wide.

Ali is going to cover the path with gravel.
One bag of gravel will cover 10 m^2 of the path.

How many bags of gravel does Ali need to buy?
You must show your working.

..... bags

(Total for question = 4 marks)

Q14.

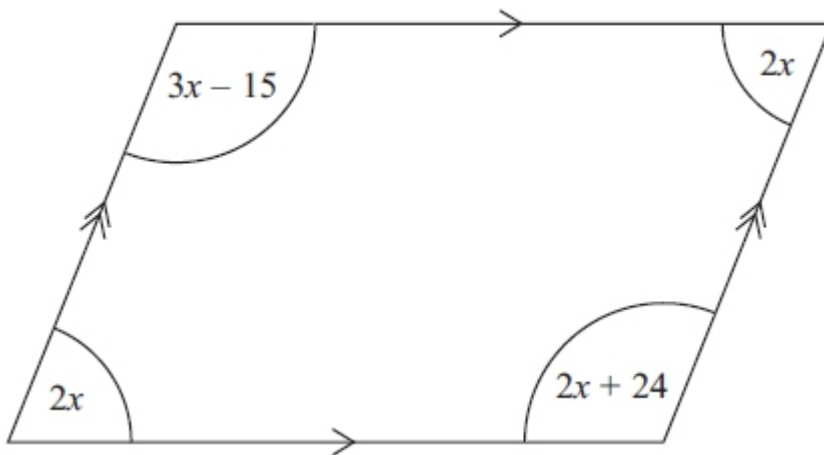


Diagram **NOT** accurately drawn

The diagram shows a parallelogram.
The sizes of the angles, in degrees, are

- $2x$
- $3x - 15$
- $2x$
- $2x + 24$

Work out the value of x

$x = \dots\dots\dots$

(Total for Question is 3 marks)

Q15.

The diagram shows a trapezium.

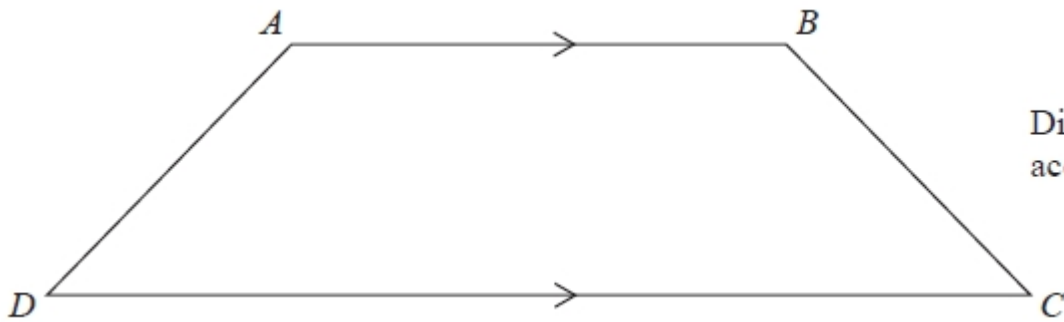


Diagram **NOT**
accurately drawn

$AD = x$ cm.

BC is the same length as AD .

AB is twice the length of AD .

DC is 4 cm longer than AB .

The perimeter of the trapezium is 38 cm.

Work out the length of AD .

..... cm

(Total for Question is 4 marks)