edexcel

GCSE Mathematics Practice Tests: Set 4

Paper 1F (Non-calculator)

Time: 1 hour 30 minutes

You should have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.

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*.
- **Calculators must not be used.**
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

- The total mark for this paper is 80
- 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.

ALWAYS LEARNING PEARSON

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1. Simplify $3f - 2f + f$

.....

(Total 1 mark)

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2. (a) Write down the value of the **6** in the number 26 780

.....

(1)

(b) Write the number 6749 to the nearest hundred.

.....

(1)

(c) Write 0.0763 correct to **one** significant figure.

.....

(1)

(Total 3 marks)

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3. Here is part of a railway timetable.

New Street	10 13	10 30	10 33
Marston Green	10 26	↓	10 41
Birmingham International	10 29	10 39	10 45
Hampton-in-Arden	10 32	↓	10 48
Tile Hill	10 40	↓	10 55
Coventry	10 47	10 49	11 00

(*a*) Work out how long the 10 13 train takes to go from New Street to Coventry.

..... minutes
(1)

Harry is at Birmingham International.
He needs to be at Tile Hill by 11 00.

(*b*) What time is the latest train from Birmingham International he can catch?

.....
(1)

(Total 2 marks)

4. Liz asks 20 people to name the flavour of chocolate they like best.

Here are her results.

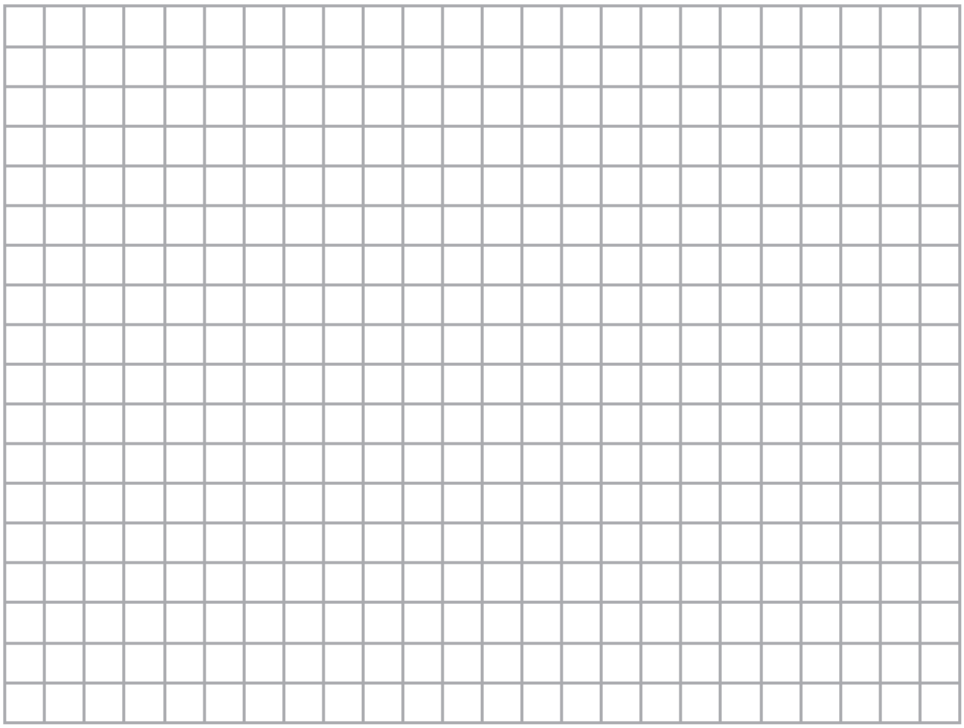
milk	plain	orange	plain	milk
coffee	white	milk	milk	orange
white	coffee	plain	milk	milk
milk	plain	coffee	milk	orange

(*a*) Complete the frequency table.

Flavour of chocolate	**Tally**	**Frequency**
plain		
milk		
coffee		
orange		
white		

(2)

(*b*) On the grid, draw a suitable chart or diagram to show Liz's results.



(3)

(Total 5 marks)

5. Susan and Joe are going on holiday.
They can take two cases onto the plane free of charge if the total weight of the two cases is no more than 40 kg.

Susan's case has a weight of 22.8 kg.
Joe's case has a weight of 19.5 kg.

(*a*) Can they take their two cases onto the plane free of charge?

(2)

Susan and Joe want to be at the airport terminal at 14 30.

It will take 1 hour and 20 minutes to drive from home to the airport.
It will then take a total of 30 minutes to park the car and go into the airport terminal.

(*b*) What is the latest time they can leave home?

.....

(3)

(Total 5 marks)

6. Sarah wants to buy some fruit.

She wants to buy

3 oranges at 30p each

and $\frac{1}{2}$ kg apples at £1.20 per kg.

The only money Sarah has is one 50p coin and six 20p coins.

She pays for the fruit.

Work out how much money Sarah has left.
You must show all your working.

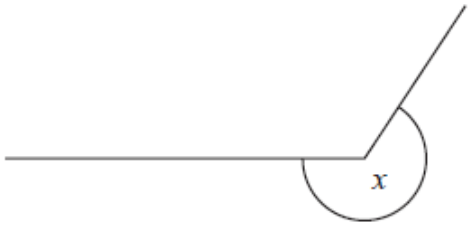
(Total 5 marks)

7. Tanaka says ‘When you multiply an odd number and an even number together, you will always get an odd number’.

Show that Tanaka is wrong.

(Total 2 marks)

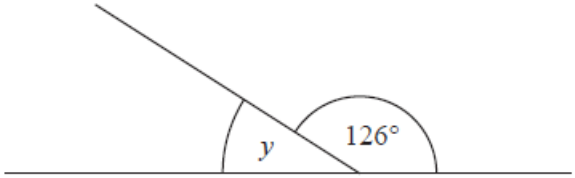
8.



(a) Write down the mathematical name for the type of angle marked *x*.

.....

(1)



(b) (i) Work out the size of the angle marked *y*.

.....°

(ii) Give a reason for your answer.

.....

.....

(2)

(c) Complete each statement correctly.

(i) The size of each angle of a rectangle is .....°

(ii) The size of each angle of an equilateral triangle is .....°

(2)

(Total 5 marks)

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9. (a) Find two factors of 36 with a difference of 5

..... and .....

(2)

The Lowest Common Multiple (LCM) of three numbers is 30
Two of the numbers are 2 and 5

(b) What could be the third number?

.....

(2)

(Total 4 marks)

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10. Debbie, Salma and Wendy did a Maths test.
The total for the test was 40 marks.

Debbie got 16 out of 40

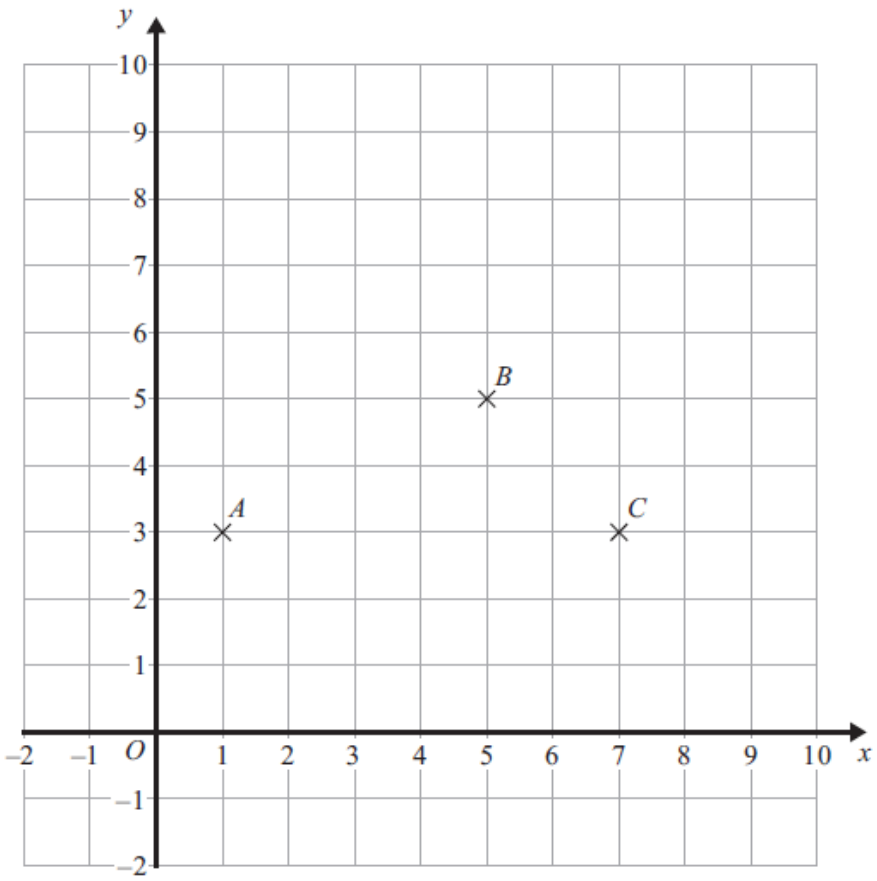
Salma got 35% of the 40 marks.

Wendy got $\frac{3}{8}$ of the 40 marks.

Who got the highest mark?
You must show all your working.

(Total 4 marks)

11.



(a) Write down the coordinates of point *C*.

(..... , ...)
(1)

(b) Find the coordinates of point *D* so that *ABCD* is a parallelogram.

(..... , ...)
(1)

E is another point on the grid.
The midpoint of *AE* has coordinates (2, 6)

(c) Find the coordinates of point *E*.

(..... , ...)
(2)

(Total 4 marks)

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12. There are 11 counters in a bag.
6 of these counters are green.
5 of these counters are red.

Some more red counters are put into the bag.

A counter is then taken at random from the bag.

The probability that the counter is red is $\frac{3}{5}$

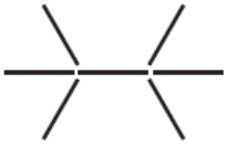
How many red counters were put into the bag?

.....

(Total 3 marks)

13. Here is a sequence of patterns made from sticks.

(a) Complete the table to show the number of sticks in each pattern.



Pattern number 1

Pattern number 2

Pattern number 3

Pattern number 4

Pattern number	1	2	3	4	5
Number of sticks	7	12	17	22	……..

(1)

(b) Find the number of sticks in Pattern number 8

.....

(1)

(c) Find an expression in terms of n for the number of sticks in Pattern number n.

.....

(2)

Ali has 60 sticks.
She wants to use as many sticks as possible to make a Pattern number.

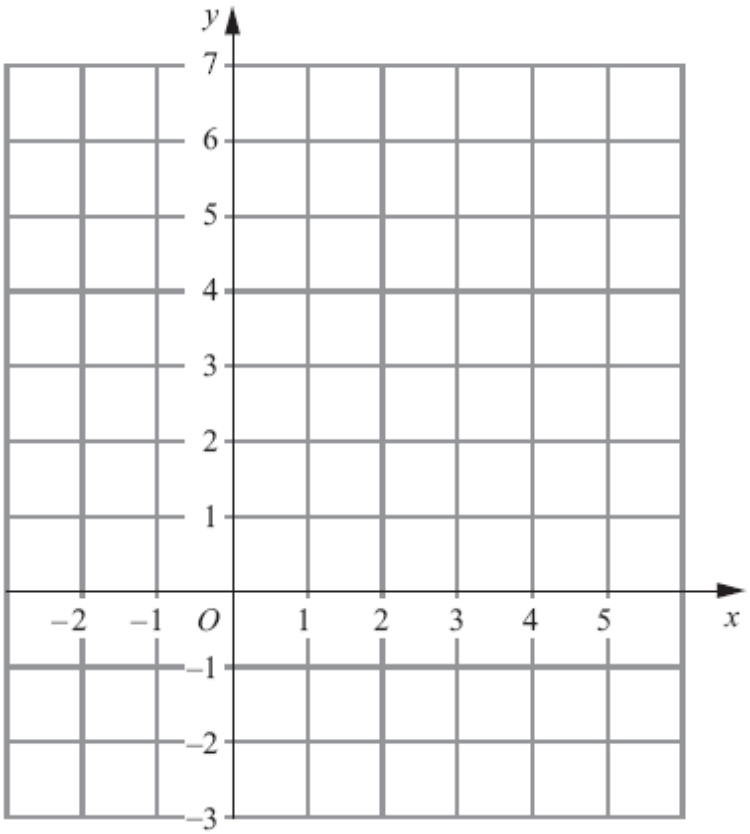
(d) What is the largest Pattern number she can make?

.....

(2)

(Total 6 marks)

14. On the grid draw the graph of $x + y = 4$ for values of x from -2 to 5



(Total 3 marks)

15. Tom is going to buy 25 plants to make a hedge.
Here is information about the cost of buying the plants.

Kirsty's Plants	**Hedge World**
£2.39 each	Pack of 25 £52.50 plus VAT at 20%

Tom wants to buy the 25 plants as cheaply as possible.

Should Tom buy the plants from Kirsty's Plants or from Hedge World?
You must show all your working.

(Total 5 marks)

16.

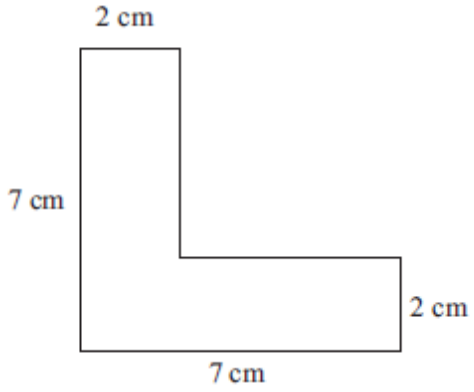


Diagram **NOT** accurately drawn

The diagram shows the cross-section of a solid prism.
The length of the prism is 2 m.

The prism is made from metal.
The density of the metal is 8 grams per cm^3.

Work out the mass of the prism.

.....

(Total 5 marks)

17. There are 50 counters in a bag.

The counters are blue or yellow or black or white.
A counter is taken at random from the bag.

The table shows each of the probabilities that the counter will be blue or black or white.

Colour	blue	yellow	black	white
Probability	0.4		0.3	0.16

Work out the number of yellow counters in the bag.

.....

(Total 4 marks)

18. Work out an estimate for the value of

$$\frac{6.8 \times 191}{0.051}$$

.....

(Total 3 marks)

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19. The normal price of a television is reduced by 30% in a sale.

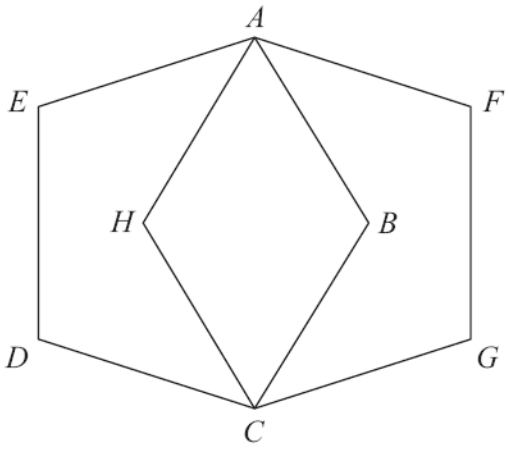
The sale price of the television is £350

Work out the normal price of the television.

£.....

(Total 3 marks)

20.



ABCDE and *AFGCH* are regular pentagons.
The two pentagons are the same size.

Work out the size of angle *EAH*.
You must show how you got your answer.

.....°

(Total 4 marks)

21. Harry travels from Appleton to Brockley at an average speed of 50 mph.
He then travels from Brockley to Cantham at an average speed of 70 mph.

Harry takes a total time of 5 hours to travel from Appleton to Cantham.
The distance from Brockley to Cantham is 210 miles.

Calculate Harry's average speed for the total distance travelled from Appleton to Cantham.

..... mph

(Total 4 marks)

TOTAL FOR PAPER IS 80 MARKS