

Surname	
Other names	

Mathematics

Unit 2F

Unit 2 Foundation Tier

Practice Paper for GCSE

For this paper you must have:

- mathematical instruments.

You must **not** use a calculator.



Time allowed

- 1 hour 15 minutes

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the space provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this booklet. Cross through any work that you do not want to be marked.

Information

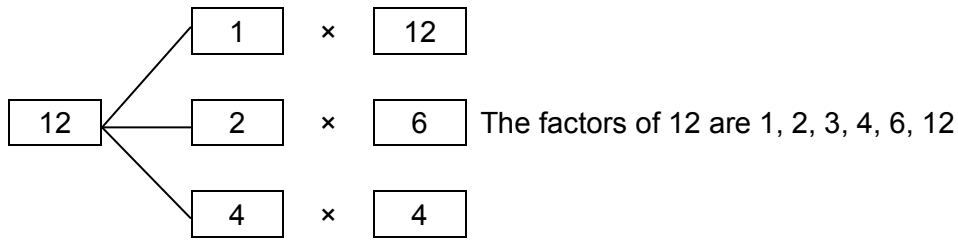
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 66.
- Quality of written communication is specifically assessed in questions 2, 13 and 17. You will be marked on your ability to:
 - use correct and accurate mathematical notation and vocabulary
 - organise your work clearly.
- You may ask for more answer paper, graph paper and tracing paper. These must be tagged securely to this answer booklet.

Advice

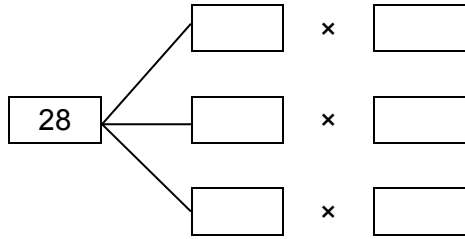
- In all calculations, show clearly how you work out your answer.

This paper is intended for practice only. Pearson Education does not guarantee that the style or content of this paper matches the public examination.

1 Here is a diagram to find the factors of 12.



Complete the diagram below to find the factors of 28.



(3 marks)

2* Bottles of pop are sold in packs of 6.
Each pack costs £3.12.
Joe buys 5 packs.

(a) How many bottles of pop does he buy altogether?

.....
.....

(1 mark)

(b) How much does Joe pay for the 5 packs?

.....
.....

(2 marks)

(c) Joe pays with a £20 note. How much change should he receive?

.....
.....

(1 mark)

3 Linda works out the answer to 16.7×32.8 on a calculator. Her answer is shown here.



(a) Round her answer to the nearest 10.

.....
(1 mark)

(b) Round her answer to one decimal place.

.....
(1 mark)

4 Here is a number pattern.

$1 + 4 = 5$

$1 + 4 + 7 = 12$

$1 + 4 + 7 + 10 = 22$

..... =

..... =

(a) Write down the next two lines of the pattern.

(4 marks)

(b) Describe in words the rule for continuing the sequence 5, 12, 22, ...

.....
(1 mark)

5 Work out:

(a) $15.6 + 9.7$

.....
(1 mark)

(b) $9.1 - 4.9$

.....
(1 mark)

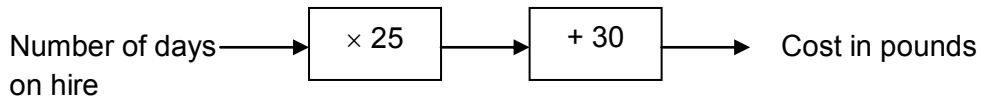
(c) $175 \div 7$

.....
(1 mark)

(d) 243×48

.....
(3 marks)

6 Here is a rule to work out the cost of hiring a car.



(a) How much does it cost to hire the car for 7 days?

.....

 (2 marks)

(b) Millie hires the car and pays £330.
 For how many days did she hire the car?

.....

 (2 marks)

7 Tim has some coins that are all the same value.
 The total value of his coins is £3.
 Sally also has some coins that are all the same value.
 The total value of her coins is £1.60.
 Tim puts one coin in a charity box and Sally puts two coins in the same charity box.
 They put a total of 90p in the box.
 Who has more coins, Tim or Sally?
 You **must** show your working.

.....

 (4 marks)

8 Complete the following table.

$x = 12$	$4x = 48$
$y = \dots\dots$	$5y = 45$
$3z = 18$	$7z = \dots\dots$

(3 marks)

9 Josh has 300 marbles.
 84 of the marbles are red.
 109 of the marbles are blue.
 The rest of the marbles are green.

(a) How many green marbles does Josh have?

.....

(2 marks)

(b) Josh buys 30 more marbles.
 He now has the same number of both colours.
 How many red marbles does he buy?

.....

(3 marks)

10 Two sets of algebraic expressions are shown below.
 Draw a line from each expression on the left to the equivalent expression on the right.
 One line has already been drawn.

		$4x^3$
$5x - x$	$4x - 4$	$4x$
$4x \times x$	x^4	4
$x + 3x$	$4x - 1$	$4x^2$
$4(x - 1)$		
$x \times x \times x \times x$		

(4 marks)

11 The table shows Naomi's marks in two tests.

Test	Mark
1	90 out of 120
2	56 out of 80

In which test did Naomi do better?
 You **must** show your working.

.....

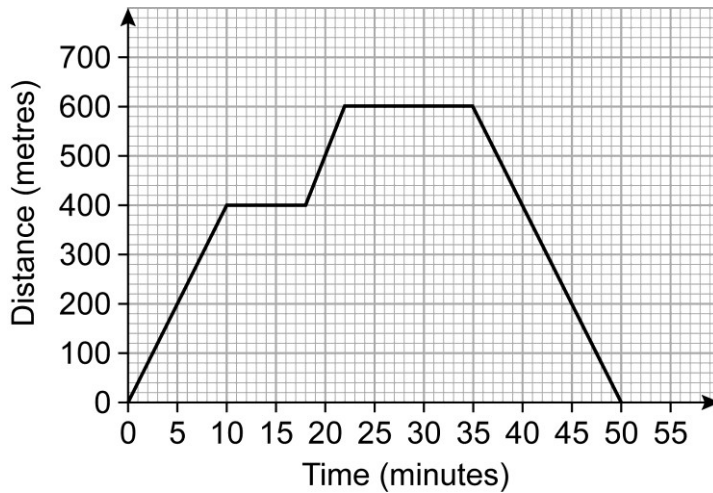
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(3 marks)

12 The graph shows Toby's journey to the local shops.



(a) For how long altogether did Toby stop on his journey?

.....

.....

(2 marks)

(b) What is the total distance that Toby travelled on his journey?

.....

.....

(1 mark)

13* Lucy works 130 hours per month.
 She is paid £7 an hour.
 Her rent is £600 per month.
 Lucy gets a pay rise and now earns £7.20 an hour.
 Her rent increases by 4%.
 Is Lucy better off or worse off each month?
 You **must** show your working.

.....

(5 marks)

14 The n th term of a sequence is $3n - 4$
 Which term of the sequence is 23?

.....

(2 marks)

15 A printing firm uses this formula to work out the cost of printing leaflets.

$$c = \frac{8000}{n} + 6$$

where c is the cost of a leaflet in pence, and n is the number of leaflets printed.

(a) The firm gets an order for 2000 leaflets.
 Work out the cost per leaflet.

.....

(2 marks)

(b) On another order, the cost per leaflet works out at 11 pence.
 How many leaflets were printed?

.....

(2 marks)

16 Use approximations to estimate the value of $\frac{4018}{204.6 \times 0.197}$

.....

.....

.....

.....

(3 marks)

17* Maggie works for a courier service, delivering parcels. She uses her own car for her work and can claim 40p per mile in travelling expenses. On average she drives 1500 miles per month in the course of her work. This table gives some information about the running costs of Maggie’s car.

Petrol consumption	60 miles per gallon
Tax, insurance and other running costs	5p per mile
Servicing	£260 per year

Petrol costs £6 per gallon.
 Maggie uses any profit that she makes on her travelling expenses to go towards the cost of her summer holiday.
 How much money will she have going towards her summer holiday after one year?
 You **must** show your working.

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(6 marks)