

Foundation Mathematics - Practice Examination F

Please note ... the format of this practice examination is the same as the current format. The paper timings are the same, as are the marks allocated.

Calculators may only be used in Paper 2.

MATHEMATICS

Standard Grade - Foundation Level

Paper I

Time Allowed - 20 minutes

First name and initials

Surname

Class

Teacher

Read Carefully

1. Answer as many questions as you can.
2. Write your answers in the spaces provided .
3. Full credit will be given only where the solution contains appropriate working.
4. **You may not use a calculator**

5. The test marks of 20 pupils are shown below:

2 5 3 4 2
 1 4 1 5 4
 4 3 2 3 3
 3 4 3 2 1

(a) Complete the frequency table:

(3)

Mark	Tally	Frequency
1		
2		
3		
4		
5		

(b) What is the **modal** mark?

(1)

6. The office water cooler holds 9 litres of water, when full.
 The plastic cups were changed from the 250 ml size to the 200 ml size.
 How many **more** cups can now be filled from the cooler.



(5)

7. Alex was asked to photocopy some pictures.
 The numbers of copies are recorded in a book.

Calculate the missing entries for Evan and Alex and complete the table.

(3)

Name	Number of copies	Total
Jim	20	20
John	40	60
Evan	35	_____
Alex	_____	154

	Give 1 mark for each •	Illustrations for awarding each mark												
1(a)	<ul style="list-style-type: none"> • carry out calculation correctly 	<ul style="list-style-type: none"> • 247 												
1(b)	<ul style="list-style-type: none"> • carry out calculation correctly 	<ul style="list-style-type: none"> • 25.4 												
1(c)	<ul style="list-style-type: none"> • knowing to divide by 4 • carry out calculation correctly 	<ul style="list-style-type: none"> • $96 \div 4$ • 24 <p style="text-align: right;">4 marks KU</p>												
2.	<ul style="list-style-type: none"> • knowing to work out $\frac{1}{5}$ (or otherwise) • answer 	<ul style="list-style-type: none"> • $\frac{1}{5}$ of 280 • £56 <p style="text-align: right;">2 marks KU</p>												
3	<ul style="list-style-type: none"> • knowing to multiply • multiplying correctly • put into £ (or £1 = 100p) • subtracting 	<ul style="list-style-type: none"> • 36×3 • 108 • £1.08 • $£1.08 - £1 = 8p$ (or $108 - 100$) <p style="text-align: right;">4 marks RE</p>												
4.	<ul style="list-style-type: none"> • changing 45 minutes into hours • changing 1 week into days • multiplying correctly • writing as a mixed number 	<ul style="list-style-type: none"> • 45 minutes = $\frac{3}{4}$ hour • 1 week = 7 days • $7 \times \frac{3}{4} = \frac{21}{4}$ • $5\frac{1}{4}$ hours <p style="text-align: right;">4 marks KU</p> <p>45 × 7 = 315 minutes etc. is also acceptable.</p>												
5(a)	<ul style="list-style-type: none"> • 1 mark for 2 entries correct • 2 marks for 3 or 4 entries correct • 3 marks for all correct 	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Mark</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> </tr> <tr> <td>2</td> <td>4</td> </tr> <tr> <td>3</td> <td>6</td> </tr> <tr> <td>4</td> <td>5</td> </tr> <tr> <td>5</td> <td>2</td> </tr> </tbody> </table>	Mark	Frequency	1	3	2	4	3	6	4	5	5	2
Mark	Frequency													
1	3													
2	4													
3	6													
4	5													
5	2													
5(b)	<ul style="list-style-type: none"> • answer 	<ul style="list-style-type: none"> • mode = 3 <p style="text-align: right;">4 marks KU</p>												
6	<ul style="list-style-type: none"> • knowing to change litres into millilitres • knowing to divide 9000 by capacity of both cups • carry out calculation correctly • carry out calculation correctly • answer 	<ul style="list-style-type: none"> • $9\text{ l} = 9000\text{ ml}$ • $9000 \div 200$, $9000 \div 250$ • 45 cups • 36 cups • $45 - 36 = 9$ more cups <p style="text-align: right;">5 marks RE</p>												
7.	<ul style="list-style-type: none"> • calculate total amount for Evan • knowing to subtract above from 154 • carry out calculation correctly 	<ul style="list-style-type: none"> • $60 + 35 = 95$ • $154 - 95$ • 59 copies <p style="text-align: right;">3 marks RE</p>												

Total marks: KU 14 RE 12

Foundation Mathematics - Practice Examination F

Please note ... the format of this practice examination is the same as the current format. The paper timings are the same, as are the marks allocated.

Calculators may only be used in this paper.

MATHEMATICS **Standard Grade - Foundation Level**

Paper II

Time Allowed - 40 minutes

First name and initials

Surname

Class

Teacher

Read Carefully

1. Answer as many questions as you can.
2. Write your answers in the spaces provided .
3. Full credit will be given only where the solution contains appropriate working.
4. **You may use a calculator**

1. Erin's electricity bill is shown below:

Meter Readings (units)	
Present	Previous
8340	8110

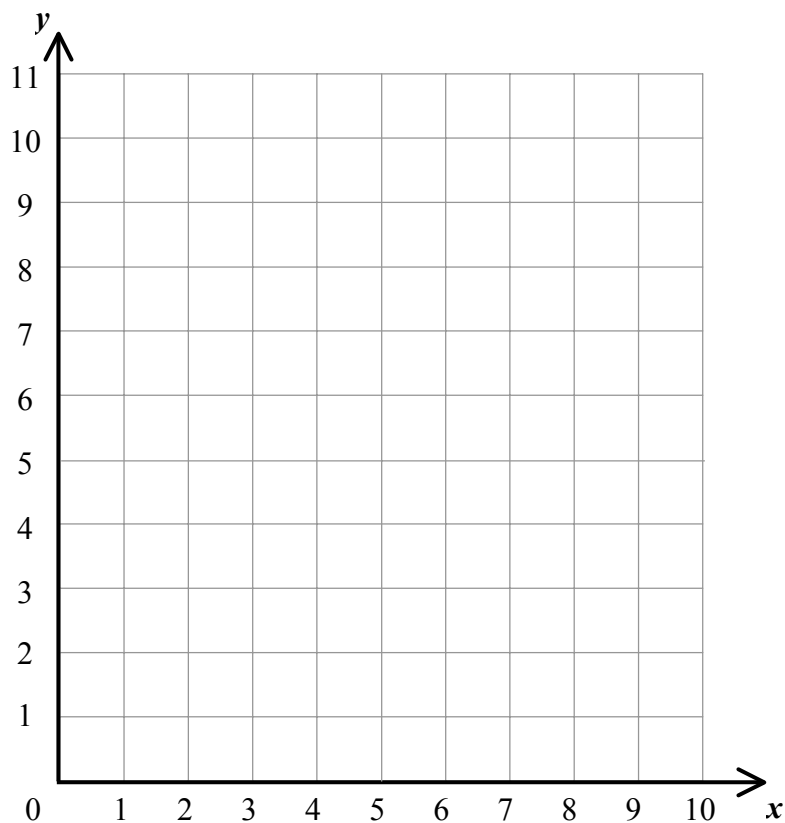
(a) How many units were used?

(2)

(b) Each unit costs 16 pence. Find the cost of the units used.

(3)

2. The points A(5, 2) and C(5,10) are **opposite** corners of a square, ABCD.



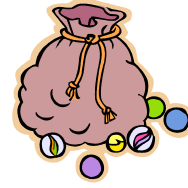
(a) Plot A and C on the grid above.

(2)

(b) Find the coordinates of B and D, the other two corners.

(4)

3. Alison has a bag of marbles.
There are 5 green, 8 blue and 7 yellow marbles altogether.



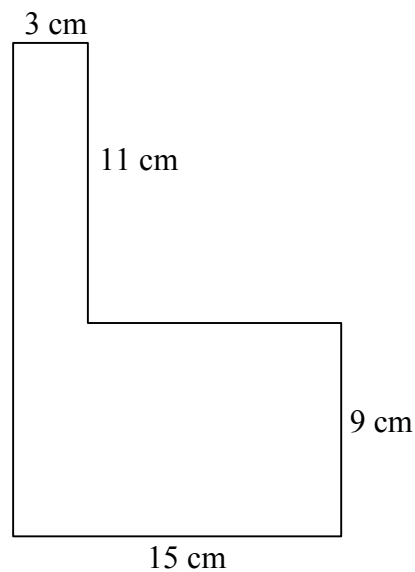
(a) What fraction of the marbles are yellow?

(2)

(b) A white marble is added to the bag.
What fraction of the marbles, now in the bag, **are not yellow**?
Express your fraction in its simplest form.

(3)

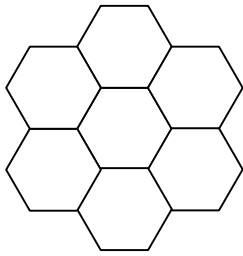
4. Emma's mum has to sew around the outside of a letter L to attach it to her school jumper for sports day.



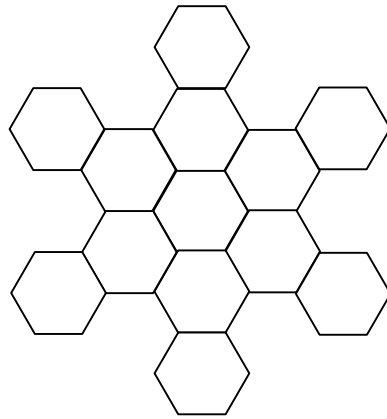
Calculate the total length Emma's mum has to sew.

(5)

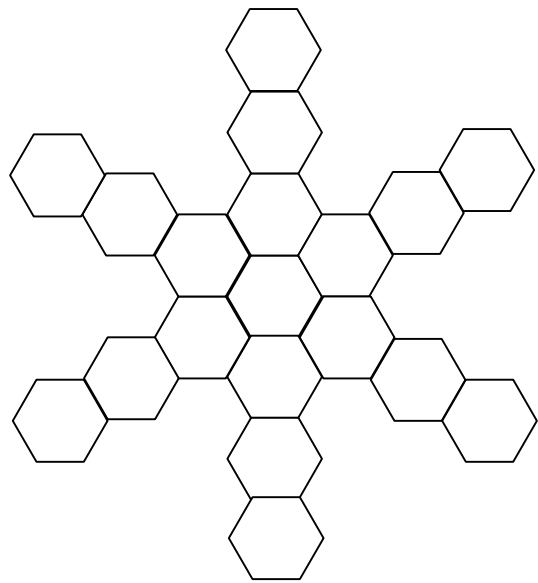
7. Danielle is making patterns out of hexagons.



Pattern 1



Pattern 2



Pattern 3

(a) Complete the table:

(4)

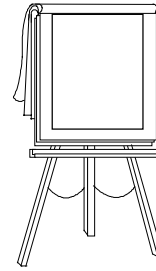
Pattern number	1	2	3	4	5		10
Number of hexagons	7						

(b) Write down a rule for finding the number of hexagons if you know the pattern number.

(2)

8. This office flipchart holds size A1 pieces of paper.

A1 paper is **double the area** of A2 paper.
 A2 paper is double the area of A3 paper.
 A3 paper is double the area of A4 paper.



(a) If **A4** paper measures 21.1 cm by 29.7 cm, calculate the area of an **A4** piece of paper.

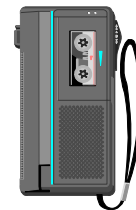
(2)

(b) Now use the instructions above to help you calculate the area of a sheet of **A1** paper.

(3)

9. Darren records messages on his dictation machine.
 The lengths of messages (in minutes) on one of his tapes were:

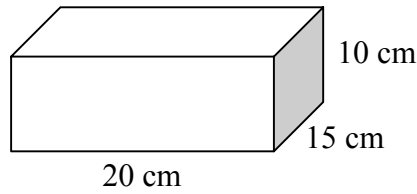
12 16 23 9 26 2 11 17



Calculate the **mean** length of message on the tape.

(4)

10. The dimensions of Brian’s sandwich box are shown:



(a) Calculate the volume of his sandwich box.

(2)

(b) He bought a new box with dimensions 25 cm by 20 cm by 10 cm. Calculate the amount of extra space in Brian’s new box.




(3)

11. Jo’s teacher has 3 stampers: a *happy face*, a *sad face* and a *brilliant* stamp. Each day Jo is given a stamp in his jotter.

On Monday and Wednesday of one particular week Joe gets the same stamp, and he only gets **one** unhappy face for the week.

Complete the table to show the six possible sets of stamps that could be in Jo's jotter (The first line has been done for you and shows one possible combination)

(3)

Monday	Tuesday	Wednesday	Thursday	Friday
	brilliant		brilliant	

	Give 1 mark for each •	Illustrations for awarding each mark
1(a)	<ul style="list-style-type: none"> knowing to subtract subtracting correctly 	<ul style="list-style-type: none"> $8340 - 8110$ 230
1(b)	<ul style="list-style-type: none"> knowing to multiply no. of units by cost multiplying correctly changing into £ 	<ul style="list-style-type: none"> 230×16 3680 p £36.80 <p style="text-align: right;">5 marks KU</p>
2(a)	<ul style="list-style-type: none"> plotting A correctly plotting C correctly 	<ul style="list-style-type: none"> on grid on grid <p style="text-align: right;">2 marks KU</p>
2(b)	<ul style="list-style-type: none"> realising AC is a diagonal attempting to draw other diagonal at 90° finding B correctly finding D correctly 	<ul style="list-style-type: none"> B(1, 6) D(9, 6) .. or other way around <p style="text-align: right;">4 marks RE</p>
3(a)	<ul style="list-style-type: none"> finding total no. of marbles stating fraction 	<ul style="list-style-type: none"> $5 + 8 + 7 = 20$ marbles yellow = $\frac{7}{20}$ <p style="text-align: right;">2 marks KU</p>
3(b)	<ul style="list-style-type: none"> realises now 21 marbles finds fraction not yellow simplifies answer 	<ul style="list-style-type: none"> $20 + 1 = 21$ marbles $\frac{14}{21}$ (or one third yellow therefore ...) $\frac{2}{3}$ <p style="text-align: right;">3 marks KU</p>
4.	<ul style="list-style-type: none"> finds missing vertical side and • finds missing horizontal side knowing to add all sides together adding correctly 	<ul style="list-style-type: none"> $9 + 11 = 20$ $15 - 3 = 12$ $15 + 9 + 12 + 11 + 3 + 20$ 70 cm <p style="text-align: right;">5 marks RE</p>
5.	<ul style="list-style-type: none"> adds times together knowing to subtract above answer from arrival time subtracting correctly 	<ul style="list-style-type: none"> 1 hour 20 minutes + 1.5 hours = 2 hours 50 minutes $16:45 - 2$ hours 50 minutes 13:55 <p style="text-align: right;">3 marks RE</p>
6(a)	<ul style="list-style-type: none"> knows how to calculate 20% answer 	<ul style="list-style-type: none"> $\frac{1}{5}$ of £640 or otherwise £128 <p style="text-align: right;">2 marks KU</p>
6(b)	<ul style="list-style-type: none"> knowing how to calculate total instalments knowing to add on deposit knowing to subtract cash price subtracting correctly 	<ul style="list-style-type: none"> $24 \times 28 = \text{£}672$ $672 + 128 = \text{£}800$ $800 - 640$ £160 <p style="text-align: right;">4 marks RE</p>
6(c)	<ul style="list-style-type: none"> knowing to divide interest by cash price simplify fraction 	<ul style="list-style-type: none"> $\frac{160}{640}$ $\frac{1}{4}$ <p style="text-align: right;">2 marks KU</p>

Marking Instructions for Foundation Level - Paper II (cont.)

	Give 1 mark for each •	Illustrations for awarding each mark
7(a)	<ul style="list-style-type: none"> • 1 mark for entries for 2 and 3 correct • 1 mark for entries for 4 and 5 correct • evidence of pattern to 10th entry • correct entry for 10 	<ul style="list-style-type: none"> • 2 – 13 , 3 – 19 • 4 – 25 , 5 – 31 • continuing pattern • 10 – 61 <p style="text-align: right;">4 marks RE</p>
7(b)	<ul style="list-style-type: none"> • and • rule completely correct 	<ul style="list-style-type: none"> • and • no. of hexagons = 6 × pattern no. + 1 <p style="text-align: right;">2 marks RE</p>
8(a)	<ul style="list-style-type: none"> • knowing to multiply length by breadth • multiplying correctly 	<ul style="list-style-type: none"> • 29.7 × 21.1 • 626.67 cm² <p style="text-align: right;">2 marks KU</p>
8(b)	<ul style="list-style-type: none"> • finds area of A3 paper • finds area of A2 paper • finds area of A1 paper 	<ul style="list-style-type: none"> • 626.67 × 2 = 1253.34 cm² • 1253.34 × 2 = 2506.68 cm² • 2506.68 × 2 = 5013.36 cm² <p style="text-align: right;">3 marks RE</p>
9.	<ul style="list-style-type: none"> • knowing to add times together and ÷ by 8 • adding correctly • dividing correctly • all calculations correct 	<ul style="list-style-type: none"> • (12 + 16 + ... + 17) ÷ 8 • 116 • 116 ÷ 8 = 14.5 • 14.5 minutes <p style="text-align: right;">4 marks KU</p>
10(a)	<ul style="list-style-type: none"> • knowing to multiply length by breadth by height • multiplying correctly 	<ul style="list-style-type: none"> • 20 × 15 × 10 • 3000 cm³
10(b)	<ul style="list-style-type: none"> • calculating volume of new box • knowing to subtract volumes • subtracting correctly 	<ul style="list-style-type: none"> • 25 × 20 × 10 = 5000 cm³ • 5000 – 3000 • 2000 cm³ <p style="text-align: right;">5 marks KU</p>
11.	<ul style="list-style-type: none"> • Monday and Wednesday always being same • only one sad face in each combination • all combinations different 	<ul style="list-style-type: none"> • see table below • see table below • see table below <p style="text-align: right;">3 marks RE</p>

Monday	Tuesday	Wednesday	Thursday	Friday
☺	brilliant	☺	brilliant	☹
☺	☹	☺	brilliant	brilliant
☺	brilliant	☺	☹	brilliant
brilliant	☹	brilliant	☺	☺
brilliant	☺	brilliant	☺	☹
brilliant	☺	brilliant	☹	☺

Total marks: KU 27 RE 28

**Total Marks for Papers I and II: KU 41
RE 40**