

Foundation Mathematics - Practice Examination D

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

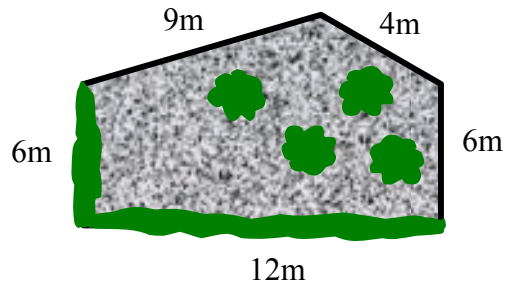
Class

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**

1. Calculate the perimeter of the garden.



(2)

2. Carry out the following calculations.

(a) $£4.32 \times 5$

(b) $\frac{1}{8}$ of 344

(c) $62.5 + 34.8$

(1)

(1)

(1)

3. Find the cost of the stereo in the sale if its original price was £160 .



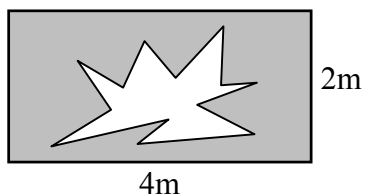
(4)

4. Catrina's class went on a day trip with her school to *Alton Towers*.
The bus left the school at 5:20 a.m. and took $5\frac{3}{4}$ hours to reach the theme park.

At what time did Catrina arrive at *Alton Towers* ?

(3)

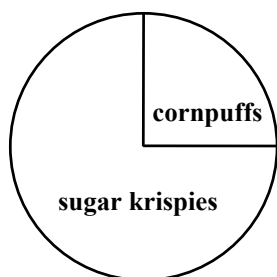
5. Darren was playing football and smashed his dining room window.



If the glass costs £9 per m² to replace, calculate the cost of replacing the window.

(4)

6. Eddie only eats *cornpuffs* or *sugar krispies* for breakfast. The pie chart shows the fractions of each.



(a) Of his 196 school days each year, how many bowls of *cornpuffs* will he eat ?

(2)

(b) How many more bowls of sugar krispies does he eat than *cornpuffs* ?

(2)

7. Elise is collecting her mum from the airport. The table below shows the charges for parking her car.

Up to	Cost
$\frac{1}{2}$ hour	£2.00
1 hour	£3.20
2 hours	£4.00

Elise arrives at the airport at 18:45 and the flight is delayed until 19:35. How much will Elise be charged for parking her car ?

(3)

	Give 1 mark for each •	Illustrations for awarding each mark
1.	<ul style="list-style-type: none"> know how to find perimeter find perimeter 	<ul style="list-style-type: none"> $9 + 4 + 6 + 12 + 6$ 37m <p style="text-align: right;">2 marks KU</p>
2(a)	<ul style="list-style-type: none"> multiply a decimal number by a single digit whole number 	<ul style="list-style-type: none"> £21.60
2(b)	<ul style="list-style-type: none"> find a unitary fraction of a quantity 	<ul style="list-style-type: none"> 43
2(c)	<ul style="list-style-type: none"> add decimal numbers 	<ul style="list-style-type: none"> 97.3 <p style="text-align: right;">3 marks KU</p>
3.	<ul style="list-style-type: none"> know how to find a simple % of a quantity calculate a simple % know to subtract subtract correctly 	<ul style="list-style-type: none"> $\frac{1}{5}$ of 160 £32 £160 - £32 £128 <p style="text-align: right;">4 marks KU</p>
4.	<ul style="list-style-type: none"> identify length of journey in hours + minutes know to add time add time correctly 	<ul style="list-style-type: none"> 5hrs 45 mins 5:20a.m. + 5 hrs 45 mins 11:05a.m. <p style="text-align: right;">3 marks KU</p>
5.	<ul style="list-style-type: none"> know to find area of window find area know to multiply area by cost per m^2 calculate cost correctly 	<ul style="list-style-type: none"> 4×2 $8m^2$ $8 \times £9$ £72 <p style="text-align: right;">4 marks RE</p>
6(a)	<ul style="list-style-type: none"> interpret pie chart carry out calculation 	<ul style="list-style-type: none"> $\frac{1}{4}$ of 196 49 bowls
6(b)	<ul style="list-style-type: none"> know to find number of bowls of sugar krispies know to subtract quantities subtract correctly 	<ul style="list-style-type: none"> $196 - 49 = 147$ $147 - 49$ 98 bowls <p style="text-align: right;">4 marks KU</p>
7.	<ul style="list-style-type: none"> know to subtract times subtract times correctly interpret data in table 	<ul style="list-style-type: none"> $19:35 - 18:45$ 50 minutes £3.20 <p style="text-align: right;">3 marks RE</p>
8(a)	<ul style="list-style-type: none"> know how to calculate number of bales of hay calculates correctly 	<ul style="list-style-type: none"> $5 \times 4 \times 3$ 60 <p style="text-align: right;">2 marks KU</p>
8(b)	<ul style="list-style-type: none"> know to divide know to round down know to add months onto July conclusion 	<ul style="list-style-type: none"> $60 \div 7$ $8.6 \rightarrow 8$ months July + another 7 full months Restock sometime in March <p style="text-align: right;">4 marks RE</p>

KU	RE
18	11

Foundation Mathematics - Practice Examination D

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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**

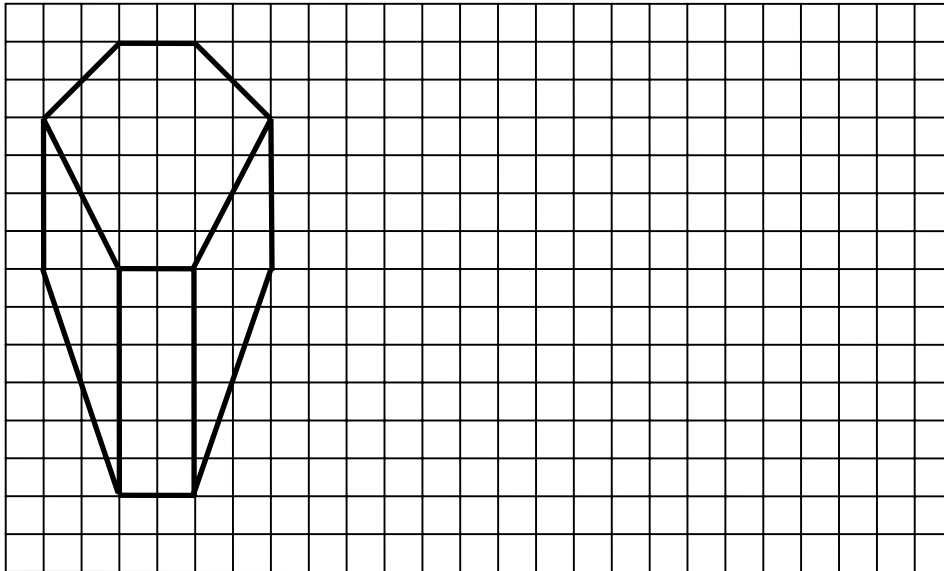
1. It takes 24 frames every second to make an action movie.
- (a) How many frames would it take to make a **2 hour** film ?

(3)

- (b) It took **145 440** frames to make the film *Payback*.
How long is this film, in **hours and minutes** ?

(4)

2. Make a copy of the shape on the grid below, making each of its sides **half** as long.



(5)

3. Patrick's mobile phone company charges 30 pence per minute.
Maureen's company charges 6p per minute.

How much cheaper is it for Maureen to make a 10 minute call than for Patrick?
(Give your answer in **pounds**.)

(4)

4. Damian keeps a note of the number of cubic metres (m^3) of trees he cuts down each day.

(a) Calculate the **average** daily cut for the five days shown in the table below.

(3)

Monday	Tuesday	Wednesday	Thursday	Friday
86.4	76.7	91.2	104.5	83.2

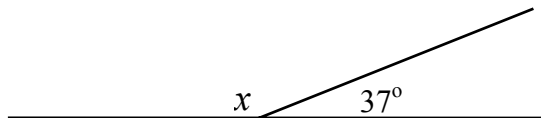
(b) Damian spilt some coffee over this table and he cannot make out the entry for Tuesday. Damian remembered that the **average** was $93.4 m^3$.

Monday	Tuesday	Wednesday	Thursday	Friday
95.3		94.5	91.2	86.4

Calculate the number of cubic metres cut on Tuesday.

(4)

5. Calculate the size of angle x .



(3)

6. (a) Mr and Mrs McKenzie and their 5 children are going to the cinema. Use the information below to find the cost of their trip . (3)

Cinema

Adult	£4.75
Child	£3.50

- (b) Mrs Jones takes her children to the cinema on the same day. The tickets cost her £18.75. How many children does she have ? (4)

7. Lauren is going out for lunch. The menu is shown below.

Starters

Prawn Cocktail
Melon

Main course

Haddock
Lasagne

Dessert

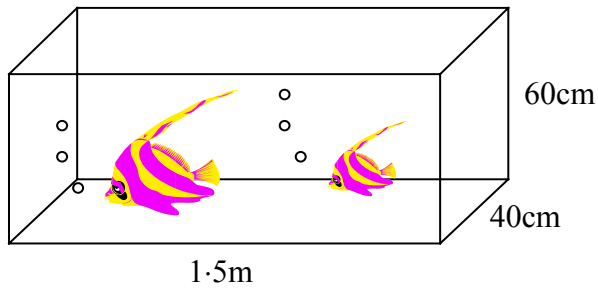
Ice Cream
Cheese Cake

- Complete the table to show all the possible choices Lauren has if she eats a starter, a main course and a dessert. *The first one is done for you* . (3)

<i>Prawn Cocktail</i>	<i>Haddock</i>	<i>Ice Cream</i>

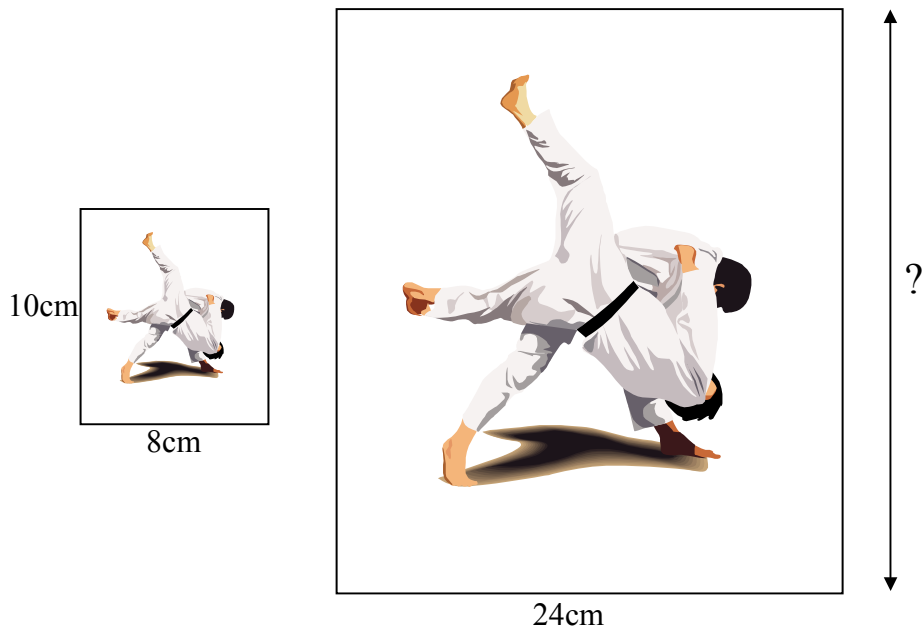
8. Calculate the volume of water in the fish tank, in **litres** .

(4)

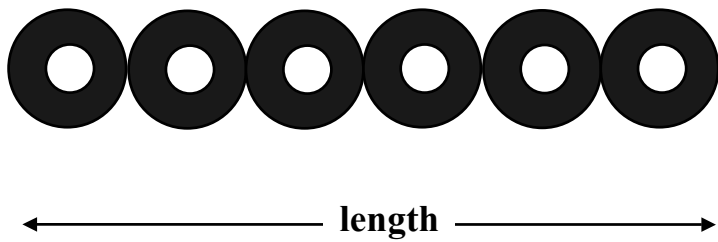


9. Katie has one of her favourite photographs enlarged.
Calculate the height of the new photo .

(3)



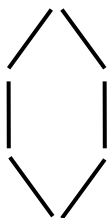
10. George arranges his toy car tyres on the floor of his room as shown.



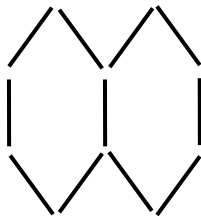
The radius of one tyre is 2.5cm
 Calculate the length of the row of tyres .

(3)

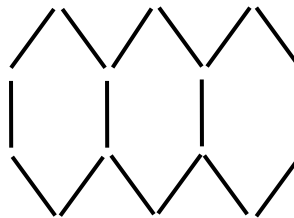
11. The hexagonal patterns below are made from matchsticks.



Pattern 1



Pattern 2



Pattern 3

(a) Complete the table .

(4)

Number of hexagons	1	2	3	4		15
Number of matchsticks	6	11				

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

(2)

	Give 1 mark for each •	Illustrations for awarding each mark
1(a)	<ul style="list-style-type: none"> • know to change into frames per minute • know to change into frames per hour • know to multiply by 2 	<ul style="list-style-type: none"> • $24 \times 60 = 1440$ • $1440 \times 60 = 86\ 400$ • $86\ 400 \times 2 = 172\ 800$ <p style="text-align: right;">3 marks KU</p>
1(b)	<ul style="list-style-type: none"> • know to divide by 24 to change into seconds • know to divide by 60 to change into minutes • divides correctly • change into hours and minutes 	<ul style="list-style-type: none"> • $145\ 440 \div 24 = 6060$ seconds • $6060 \div 60$ • 101 minutes • 1 hour 41 minutes <p style="text-align: right;">4 marks RE</p>
2	<ul style="list-style-type: none"> • reduce shape horizontally • reduce shape vertically • • reduce shape diagonally • completion of diagram 	<ul style="list-style-type: none"> • 2 of 3 lines halved • 2/4 lines halved • • (1 mark if 2 or 3 of 6 lines are halved 2 marks if 4, 5 or 6 lines are halved) • completion of diagram <p style="text-align: right;">5 marks RE</p>
3.	<ul style="list-style-type: none"> • multiply both costs by 10 correctly • know to subtract amounts • subtract correctly • change into £ 	<ul style="list-style-type: none"> • $30 \times 10 = 300\text{p}$; $6 \times 10 = 60\text{p}$ • $300 - 60$ • 240p • £2.40 <p style="text-align: right;">4 marks KU</p>
4(a)	<ul style="list-style-type: none"> • know to add and divide by 5 • adding correctly • dividing correctly 	<ul style="list-style-type: none"> • stated or implied • 442 • $88.4\ \text{m}^3$ <p style="text-align: right;">3 marks KU</p>
4(b)	<ul style="list-style-type: none"> • know to multiply average by 5 • know to add other 4 days • know to subtract two answers • calculations correct 	<ul style="list-style-type: none"> • $93.4 \times 5 = 467$ • 367.4 • $467 - 367.4$ • 99.6 <p style="text-align: right;">4 marks RE</p>
5.	<ul style="list-style-type: none"> • know straight angle = 180° • know to subtract 37° • subtracting correctly 	<ul style="list-style-type: none"> • • $180 - 37$ • 143° <p style="text-align: right;">3 marks KU</p>
6(a)	<ul style="list-style-type: none"> • calculate cost for 2 adults • calculate cost for 5 children • add together 	<ul style="list-style-type: none"> • $2 \times £4.75 = £9.50$ • $5 \times £3.50 = £17.50$ • £27 <p style="text-align: right;">3 marks KU</p>
6(b)	<ul style="list-style-type: none"> • observe 1 adult • subtract £4.75 from £18.75 • know to divide by cost of child's ticket • dividing correctly 	<ul style="list-style-type: none"> • $1 \times £4.75$ • $18.75 - 4.75 = £14$ • $14 \div 3.50$ • 4 children <p style="text-align: right;">4 marks RE</p>

(Marking Instructions for Foundation Level - Paper 2cont'd)

	Give 1 mark for each •	Illustrations for awarding each mark
7.	<ul style="list-style-type: none"> • completion of table • • 	<ul style="list-style-type: none"> • 3 marks for all 7 entries correct • 2 marks for 5 or 6 correct • 1 mark for 3 or 4 correct <p style="text-align: right;">3 marks RE</p>
8.	<ul style="list-style-type: none"> • know to change all lengths into centimetres • know how to find volume • find volume • know how to change into litres 	<ul style="list-style-type: none"> • $1.5\text{m} = 150\text{cm}$ • $V = 150 \times 40 \times 60$ • $V = 360\,000\text{cm}^3$ • $V = 360$ litres <p style="text-align: right;">4 marks KU</p>
9.	<ul style="list-style-type: none"> • find scale factor • know to multiply by scale factor • multiply correctly 	<ul style="list-style-type: none"> • $24 \div 8 = 3$ • 10×3 • 30cm <p style="text-align: right;">3 marks KU</p>
10.	<ul style="list-style-type: none"> • know to find diameter of tyre • counts tyres in length correctly • calculate length 	<ul style="list-style-type: none"> • $2.5 \times 2 = 5\text{cm}$ • 6 tyres • $6 \times 5 = 30\text{cm}$ <p style="text-align: right;">3 marks RE</p>
11(a)	<ul style="list-style-type: none"> • completion of table • • • 	<ul style="list-style-type: none"> • 3 hexagons - 16 matchsticks • 4 hexagons - 21 matchsticks • • 15 hexagons - 76 matchsticks (award 1 mark for evidence of extended pattern with one mistake) <p style="text-align: right;">4 marks RE</p>
11(b)	<ul style="list-style-type: none"> • • correct rule 	<ul style="list-style-type: none"> • • multiply by 5 and add 1 (rule must be correct to obtain these 2 marks i.e. 2 or 0 marks only) <p style="text-align: right;">2 marks RE</p>

KU	RE
23	29

Totals (both papers) KU 41 RE 40
