

AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA

JUNIOR CERTIFICATE EXAMINATION, 2000

MATHEMATICS - FOUNDATION LEVEL

THURSDAY, 8 JUNE - MORNING, 9.30 to 11.30

Attempt **all** questions.

All questions are of equal value (15 marks each).

**Marks may be lost if necessary work is not clearly shown.
Mathematics Tables may be obtained from the Superintendent.**

1. IR£630 is divided equally between 7 people. How much money does each person get?

2. Here is a shopping bill:

Bread	IR£1.74
Milk	IR£0.75
Tea	IR£2.30
Sugar	IR£1.40

(i) Find the total cost of the bill above.

(ii) I pay the bill with a IR£10 note. How much change do I get?

3. (i) What is the smallest number that 2,3 and 4 will divide into evenly?

(ii) Find the value of

$$\frac{1}{2} + \frac{1}{3} + \frac{1}{4}.$$

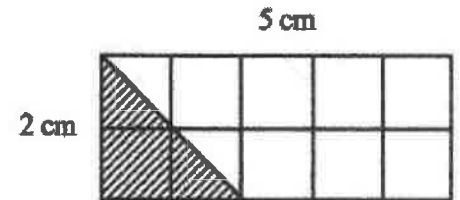
4. (i) Find the value of 234.5×10 .

(ii) Find the value of $234.5 \div 10$.

(iii) Find the value of $(234.5 \times 10) + (234.5 \div 10)$.

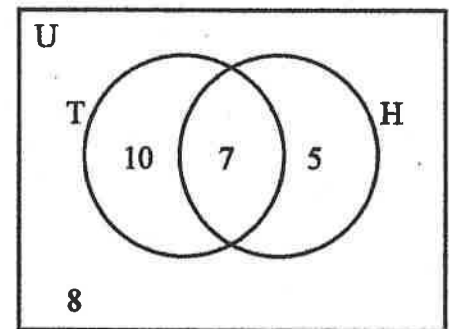
OVER →

5. (i) What is the area of the diagram on the right?
 (ii) What is the area of the shaded part?
 (iii) What fraction of the diagram is shaded?



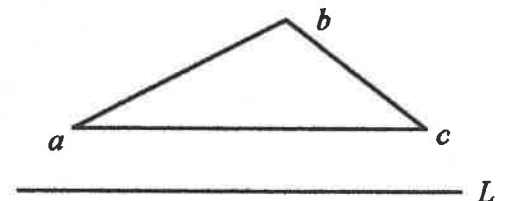
6. (i) Find 25% of IR£36.
 (ii) Find $\frac{5}{8}$ of 240 metres.
 (iii) Find 0.75 of 16 litres.

7. U is the set of pupils in a class.
 T is the set of pupils who play tennis.
 H is the set of pupils who play hurling.



- (i) How many play neither of the games?
 (ii) How many pupils are in the class?
 (iii) How many pupils play both games?

8. (i) Copy the diagram into your answerbook.
 (ii) Draw the image of the triangle abc under the axial symmetry in the line L .



9. (i) How many centimetres are in 3.25 metres?
 (ii) A rope is 3.25m long. It is cut into two pieces. One piece is 208cm.
 How long is the other piece?

10. (i) Find the value of x for which $2x - 5 = 7$.
 (ii) Find the value of $3x + 7y$ when $x = 2$ and $y = 1$.

11. The marks of 20 pupils in a test are shown below.

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

(i) Copy and complete the table below.

Marks	1	2	3	4	5
Number of pupils		6			

(ii) Find the mean (average) mark per pupil.

12. Mary invests IR£800 for 1 year at 4% per annum compound interest.

(i) How much interest does she get at the end of the year?

(ii) Mary pays tax at 25% on the interest. How much tax does she pay?

13. An electricity bill shows the following:

Meter Readings	
Present Reading	Previous Reading
87642	86971

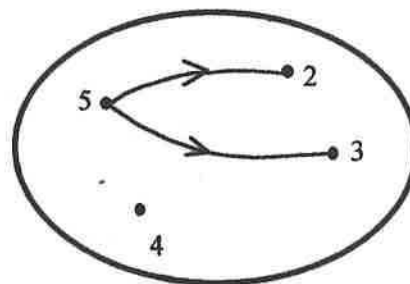
(i) How many units were used?

(ii) Each unit costs 12p. Find the total cost of the units used.

14. The diagram shows two of the arrows for the relation “is greater than” on the set shown.

Copy the diagram into your answerbook.

Draw in the four missing arrows.



15. (i) Use the Tables, page 24-25, to find $\sqrt{46.3}$.

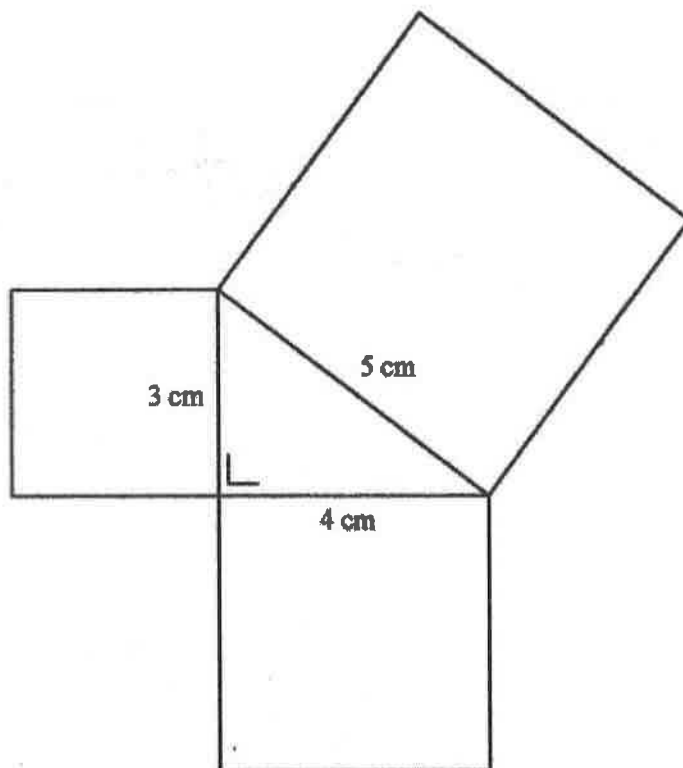
(ii) Use the Tables, page 20-21, to find $(2.34)^2$.

(iii) Write down the value of $\sqrt{46.3} + (2.34)^2$.

OVER →

16. The right-angled triangle in the diagram has sides of lengths 3cm, 4cm, and 5cm.

(i) Write down the area of each of the three squares.



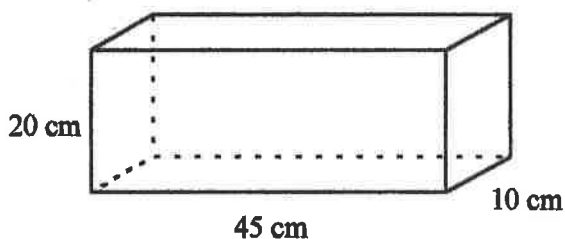
(ii) Use the areas of the squares to check the Theorem of Pythagoras.

17. A car started a journey of 150 km at 10:45 and finished the journey at 13:15.

(i) How long did the journey take?

(ii) What was the average speed of the car in kilometres per hour?

18. A rectangular tank has the measurements shown in the diagram.



(i) Find the volume (capacity) of the tank in cm^3 .

(ii) If $1000\text{cm}^3 = 1$ litre what is the volume (capacity) of the tank in litres?

19. Using a ruler and a compass, draw a triangle with sides of lengths 8cm, 5cm and 4cm. Measure the size of each angle with a protractor and write down the three measurements.

20. On graph paper, draw the graph of the line $y = 2x + 3$ from $x = 1$ to $x = 3$.