AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA

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JUNIOR CERTIFICATE EXAMINATION, 2002

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MATHEMATICS - FOUNDATION LEVEL

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THURSDAY, 6 JUNE - MORNING, 9.30 TO 11.30

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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.**   A prize of €568 is shared equally between 8 people. How much does each person get?

2.   A box of pencils costs €2.60

    (i)   How much will it cost to buy 7 boxes of pencils?

    (ii)   How much change will I get if I pay for the 7 boxes of pencils with a €20 note?

3.   **(i)**   Copy and complete $\dfrac{1}{2} = \dfrac{[\quad]}{12}$.

    (ii)   Write $\dfrac{1}{2} + \dfrac{1}{4} - \dfrac{1}{3}$ as a single fraction.

4.   **(i)**   Find the value of 125.6×10

    (ii)   Find the value of $125.6 \div 10$

    (iii)   Find the value of $(125.6 \times 10) + (125.6 \div 10)$

5.   **(i)**   A car travels 150 km in 2 hours. Calculate the average speed of the car.

    (ii)   Another car travels 150 km at an average speed of 50 km/hr.
How long does this car take to travel the 150 km?

6. *U* is the set of pupils in a class.
T is the set of pupils who play tennis.
F is the set of pupils who play football.

(i) How many pupils play both games?

(ii) How many pupils play tennis?

(iii) How many pupils are in this class?

U

T   *F*

8   2   9

5
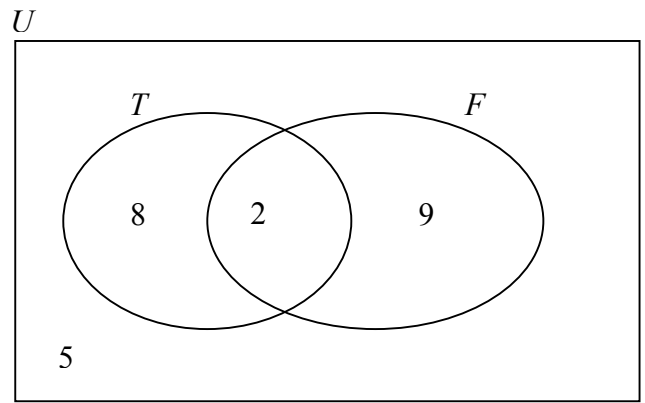
7. **(i)** Find 20% of €35.

(ii) Find $\dfrac{3}{8}$ of 240 metres.

(iii) Find 0.5 of 28 litres.

8. The number of goals scored by each of 20 teams in a competition is shown below:

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

(i) Copy and complete the table below:

Goals	1	2	3	4	5
Number of teams					

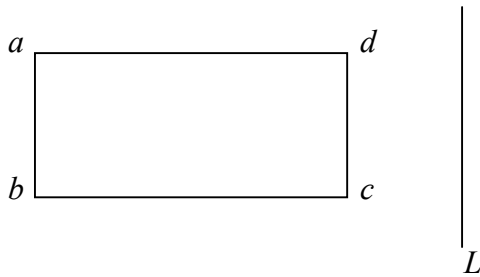**(ii)** Write down the mode.

9. A bicycle was bought for €300. It was sold for €360.

(i) Calculate the profit.

(ii) Express the profit as a percentage of the cost price.

10. **(i)** How many centimetres are in 4.37 metres?

(ii) A piece of timber is 4.37 m long. It is cut into two pieces.
One piece is 248 cm. How long is the other piece?

11. **(i)** Copy the diagram into your answerbook.

(ii) Construct the image of the rectangle *abcd* under the axial symmetry in the line *L*.

12. **(i)** Find the value of $5x + 1$ when $x = 3$.

(ii) Find the value of x for which $5x + 1 = 11$.

13. An electricity bill shows the following meter readings:

READING	PRESENT	PREVIOUS
UNITS	83796	83654

(i) How many units were used between these two readings?

(ii) Find the cost of the units used at 7.5 cent per unit.

14. **(i)** How many minutes are in 1 hour and 17 minutes?

(ii) A train left Galway at 12:35 and arrived in Athlone at 14:17. How long did this journey take?

15. There are 12 cars in a car park. 6 of the cars are red, 4 are blue and 2 are green. Draw a pie chart to show this information.

16. Use a ruler and a compass to construct a triangle with sides 9 cm, 7 cm and 6 cm.
Use a protractor to measure the largest angle in the triangle and write down your answer.

17. The table below shows the number of pupils who were late for school during a certain week:

Day	Mon	Tues	Wed	Thurs	Fri
Number of pupils	3	5	4	2	6

(i) Draw a bar chart to represent this information.

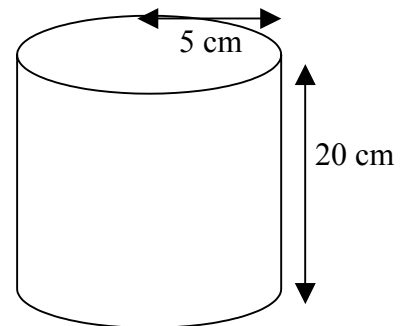**(ii)** Find the mean (average) number of pupils late per day.

18. Find, using the Tables, pages 20 - 25:

(i) $\sqrt{11.9}$

(ii) $(2.4)^2$

(iii) $\sqrt{11.9} + (2.4)^2$

19. Find the volume of a cylinder of radius 5 cm and height 20 cm.

Note: volume of a cylinder $= \pi r^2 h$.

Take $\pi = 3$.

5 cm

20 cm

20. **(i)** Given that $y = x + 1$, copy and complete the table below:

x	0	1	2	3
y				

(ii) Plot these four points on graph paper and join them to form a line.