

Name: _____

Question 1: Natural Numbers. (10 minutes)

a) Look at the list of numbers given below

-6, 3, 4, 9, 13, 15, 23, 25, 28, 64

From the list, choose

An even number	
An odd number	
Two prime number	
An integer	
A number that is divisible by 5	
A number that is a factor of 81	

b) Find the value of $3 \times (3+4) - 2^2$

Answer: _____

$(7-3) \times 4 + 16 \div 8$

Answer: _____

c) What is the lowest common multiple of 6 and 9?

Answer: _____

d) A cinema has 13 rows of seats. The rows are numbered from 1 to 13. Odd-numbered rows have 18 seats. Even-numbered rows have 20 seats. How many seats are in the cinema?

Answer: _____

Question 2: Presenting data (10 minutes)

a) Here are the ages, in years, of some members of a swimming club.

9 12 18 10 9 7 21 30 23 16
 19 32 17 28 15 8 10 15 21 10

Draw an ordered stem and leaf diagram for these ages.

You must include a key.

0	
1	
2	
3	

Key:

What age is the youngest swimmer? _____

How many members are in the club? _____

What fraction of the swimmers were aged between 0-11 years? ____

b)

A children's shoe shop took a survey of their customers shoe size over one day.

Here is a list of their responses.

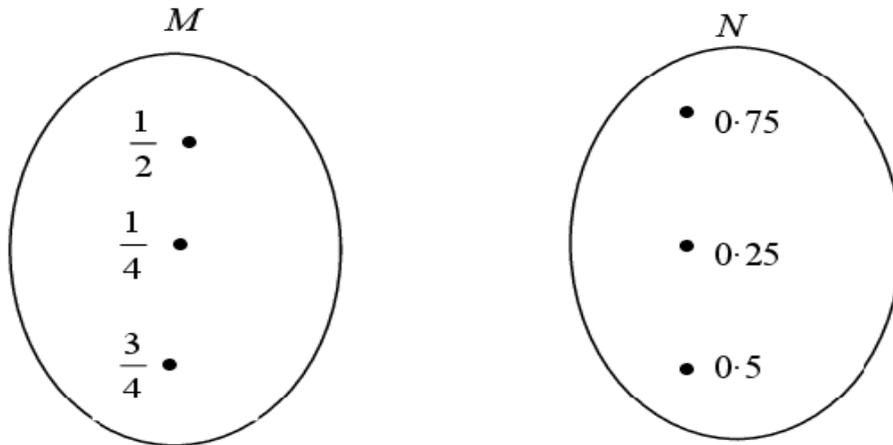
4 2 2 2 1 3 1
 2 2 3 4 1 2 3
 2 2 1 1 3 1 3
 5 1 2 3 4 2 1

Use the list above to complete the TALLY table:

Shoe Size	TALLY	TOTAL
Size 1		
Size 2		
Size 3		
Size 4		
Size 5		

1st year MATHS summer test

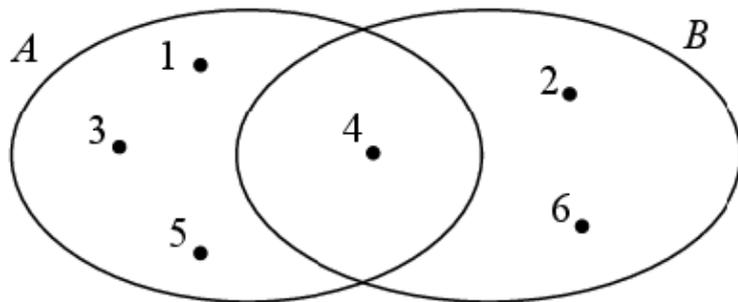
Draw arrows from set M to set N to show the relation "is equal to".



c)

d)

The sets A and B are shown in the diagram below.



Fill in the elements of the following two sets.

(i) $A = \{ \quad , \quad , \quad , \quad \}$

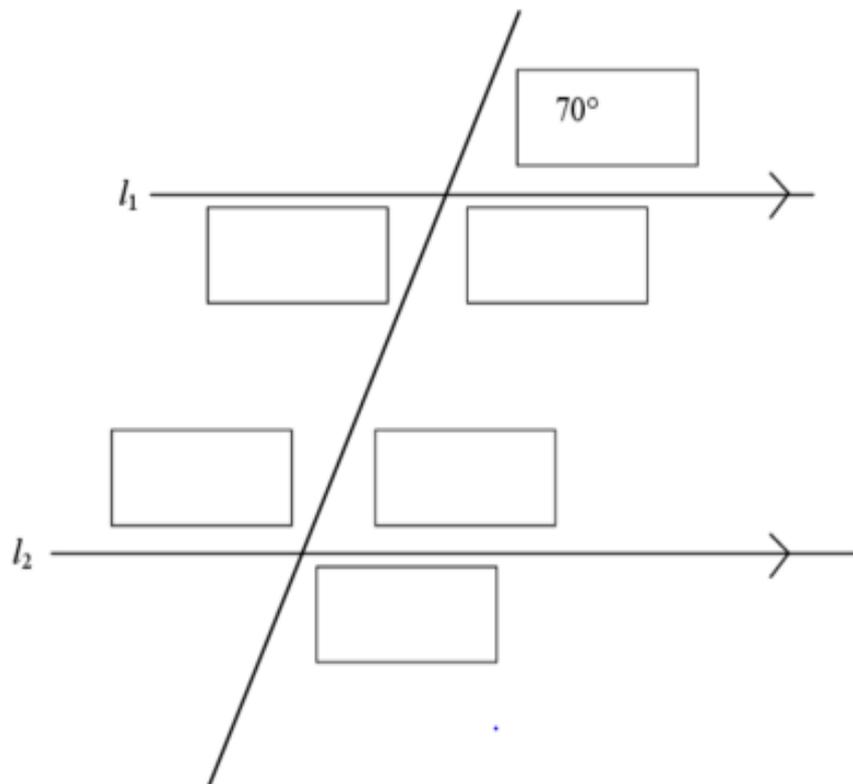
(ii) $A \cap B = \{ \quad \}$

Question 4: Geometry (10 min)

- (a) Four angles are shown below. Write in the space below each diagram whether the angle is straight, acute, obtuse, right or reflex.

- (b) In the diagram below $l_1 \parallel l_2$. Write the measure of each angle shown by an empty box into the diagram, without using a protractor.



Question 6: Algebra

a) Simplify $6x - xy + 5x - 7xy$

Answer: _____

b) If $a = 4$ and $b = 2$

Find the value of $6a - 2ab$

Answer: _____

c) Find the value of x :

$$5x + 2 = 4x + 8$$

d) Remove the brackets:

$$2(x+4) - 3(x - 4)$$

Answer: _____

e) Multiply out the brackets and simplify:

$$(5x - 2)(4x + 3) \quad \text{Answer: } \underline{\hspace{4cm}}$$

Question 7: Percentages.

a) First, write the percentages as fractions. Then, calculate the percentage of each number.

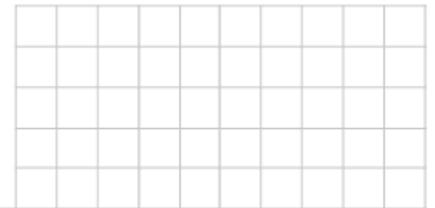
- i) 20% of 60
- ii) 90% of 1200
- iii) 60% of 25

b)

Shop B offers $\frac{1}{4}$ off the usual price of the bike.

Fill in the table to show the “special offer” price of the bike in this shop.

Usual Price:	€320
“Special offer” price:	



c)

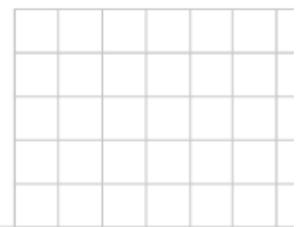
Daniel wants to buy a bike. The usual price of the bike is €320.

The bike is on “special offer” in three different shops.

(a) **Shop A** offers 10% off the usual price of the bike.

Fill in the table to show the “special offer” price of the bike in this shop.

Usual Price:	€320
“Special offer” price:	



d)

In **Shop C**, Daniel can pay €60 now, plus €20 at the end of each month for 12 months.

Fill in the table to show the “special offer” price of the bike in this shop.

Usual Price:	€320
“Special offer” price:	



Question 9: Data (10 minutes)

What is primary data?

What is secondary data?

What is discrete data?

What is continuous data?

What is categorical data?

b) A new variety of soup “Tayto Cheese and Onion”, is to be launched by a leading manufacturer. They wish to know if it will be popular and sell well. People are asked to try a free sample and comment on their impression. Write unbiased questions for your questionnaire. State where you will carry out your research.