

**Time 1 hour 20 minutes**

170 Copies

This question paper consists of TWO printed pages.

Write your name clearly on **ALL** sheets of paper used.

All of the questions are to be attempted.

Calculators are **NOT** allowed.

All working **MUST** be shown.

Number your answers carefully and do **NOT** do questions beside one another.

The number of marks awarded to each question is indicate in square brackets.

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**SECTION A**

**Complete the following sentences by filling in the blanks on the question paper.**

1. 12.932 rounded to 1 decimal place is \_\_\_\_\_ [1]

2. Calculate the following

a)  $\frac{4}{5} - \frac{3}{5} =$  \_\_\_\_\_ [1]

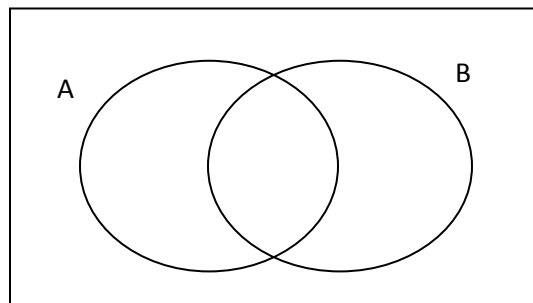
b)  $-3 + 7 =$  \_\_\_\_\_ [1]

c)  $-5 \times 8 =$  \_\_\_\_\_ [1]

d)  $67 - (-32) =$  \_\_\_\_\_ [1]

3. If  $a = -2$ , then the value of  $3a^2$  is \_\_\_\_\_ [1]

4. Describe the shaded region using set notation



\_\_\_\_\_ [1]

5. List the set of first six natural numbers: \_\_\_\_\_ [1]

6. True or False?  $N \subset W \subset Z \subset Q \subset R$  \_\_\_\_\_ [1]

7. List all the subsets of  $\{a, b\}$ . \_\_\_\_\_ [1]

PLEASE TURN OVER

## SECTION B

Questions in this section **MUST** be done on foolscap

1. a) Express the ratio 18: 30 in its simplest form.  
b) Divide \$48 in the ratio 3: 5.  
c) Sarah earns \$64 for 8 hours of work. How much does she earn for 35 hours of work?  
d) 12 men take 40 days to do a job. Assuming they are working at the same rate, how long will it take 8 men to do the same job?

[Total 10 marks]

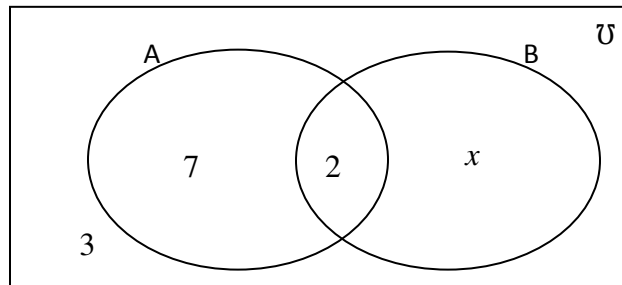
2. a) Arrange the following numbers from smallest to largest: 5.24, 4.85, 5.18, 6.69, 5.26.

b) Calculate the following

- i.  $0.1 \times 0.6$
- ii.  $90 \div 0.03$
- iii.  $0.04^2$

[Total 6 marks]

3.



If  $n(U) = 17$ , find:

- a)  $x$
- b)  $n(A)$
- c)  $n(B)$
- d) Describe in words the region which has 7 elements

[Total 7 marks]

4. a) List all the prime factors of 12.

b) By using prime factors find

- i. the LCM of 72 and 20
- ii. the HCF of 72 and 20

[Total 7 marks]

PLEASE TURN OVER

5. Simplify the following as far as possible

a)  $5x \times x$

b)  $5a + 3b - 6a$

c)  $\frac{n}{n^2}$

[Total 6 marks]

6. Solve the following equations showing **ALL** steps

a)  $x + 3 = 7$

b)  $5k - 3 = 17$

c)  $4m = 5m + 8$

[Total 5 marks]

7. Calculate

a)  $\frac{3}{5} \div \frac{3}{10}$

b)  $3\frac{1}{4} - 2\frac{1}{5}$

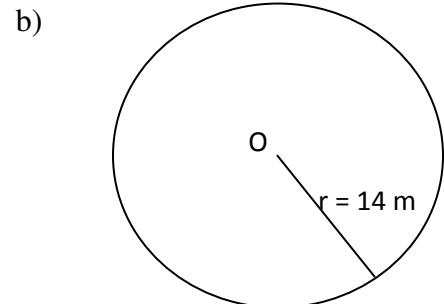
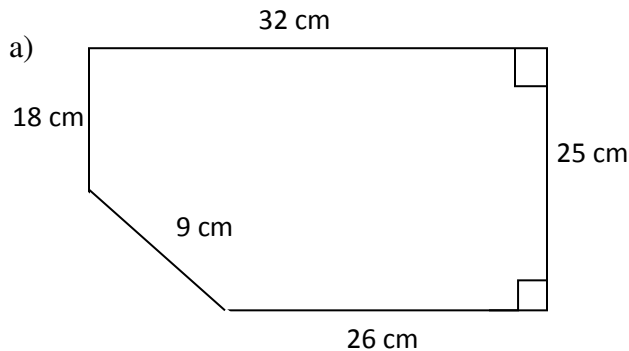
[Total 6 marks]

8. a) A tailor charges \$400 to make a suit but gives a 10% discount. Calculate the cash price.

b) A man sold an item for \$95 thus making a 20% profit. What is the cost price of the item?

[Total 6 marks]

9. Calculate the area and perimeter of the following shapes. Taking  $\pi = \frac{22}{7}$



[Total 10 marks]

10. The table below shows the favourite sports of 60 students.

Sports	Football	Netball	Cricket	Rugby	Tennis	Swimming
Number of Students	24	10	6	9	6	5

Draw a bar chart for the above information on squared paper.

[Total 9 marks]

END OF EXAM