

**GREENLAWNS HIGH SCHOOL  
FINAL EXAMINATION 2021**

**STANDARD: 8  
MARKS: 40**

**SUBJECT: MATHEMATICS  
TIME:**

**(All questions are compulsory)**

**QI a)** Find the volume and total surface area of a cuboid whose length is 12cm, breadth is 4.5cm and height is 2.5cm. [4]

**b)** If 65 men can do a certain piece of work in 28 days, how long will 35 men take to do the same piece of work? [3]

**c)** Factorise:  $2m^2 - 15m + 22$  [3]

**QII a)** The angles of a quadrilateral are in the ratio 2 : 4 : 5 : 7. Find all the angles. [4]

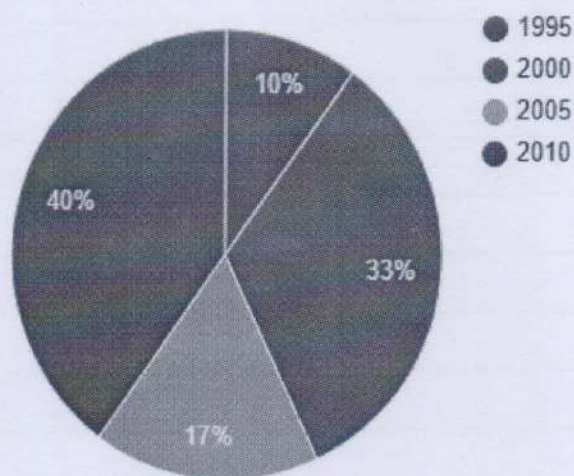
**b)** If  $A = \{1, 2, 3, 4\}$ ,  $B = \{3, 4, 5, 6\}$ ,  $C = \{5, 6, 7, 8\}$  [3]

Find: i)  $A \cup B$       ii)  $B \cap C$       iii)  $A \cap (B \cup C)$

**c)** Find the edge of a cube whose surface area is  $384m^2$ . [3]

**QIII a)** The pie chart given below shows the percentage change in subscription of a certain newspaper every five years. Study the pie chart carefully and answer the questions that follow: [4]

**Newspaper subscription**



1. Which year has the least number of newspaper subscription?
2. Which year has the largest number of newspaper subscription?
3. What is the difference in percentage of newspaper subscription in 2010 and 2000?
4. What is the total percentage of newspaper subscription in 2000 and 2005?

b) ABCD is a rhombus. If  $\angle BDC = 35^\circ$ , Find the measure of  $\angle BCD$ . [3]

c) Do as directed: [3]

i) Write the following set in roster form.

$A = \{\text{odd composite numbers between 60 and 80}\}$

ii) Write the following set in set builder form.

$Q = \{1, 3, 5, 9, 15, 45\}$

iii) Write the cardinal number of the set given below:

$C = \{x : x \text{ is a letter in the word 'EXAMINATION'}\}$

IV a) What is the area of a tin sheet required to make 10 cuboidal boxes with measures 10cm, 8cm and 4cm? [4]

b) Factorise:  $2x^3 - 162x$  [3]

c) A military camp has enough food supplies to feed 1000 soldiers for 36 days. If 500 additional soldiers join the camp how long will the food supplies last? [3]