

**GREENLAWNS HIGH SCHOOL**  
**FINAL EXAMINATION YEAR 2019-2020**

**SUBJECT : MATHEMATICS**  
**TIME : 2 HOURS**

**CLASS : VIII**  
**MARKS : 80**

You will not be allowed to write during the first fifteen minutes. This time is to be spent in reading the question paper. Answers to this question paper must be written on the answer booklet provided separately.

- All rough work must be shown on the same sheet alongside the answer.
- Omission of any essential step will result in loss of marks.
- Answer all questions in Section A and any four questions in Section B.

Section A

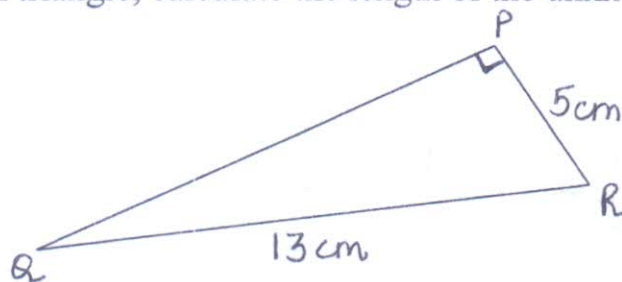
(All questions are compulsory)

- I a) If the angles of a quadrilateral are in the ratio 5:8:11:12, find all the angles. (4)  
b) John bought a watch for Rs.540 and sold it for Rs.585. Find his profit and profit percentage. (3)  
c) Using the identity  $(a + b)(a - b) = a^2 - b^2$ , find the value of  $25.3 \times 24.7$  (3)  
d) The following table shows the number of students in various classes in a hobby school: (4)

Hobby	Students
Computers	180
Painting	150
Pottery	27
Paper cutting	75
Glass work	108

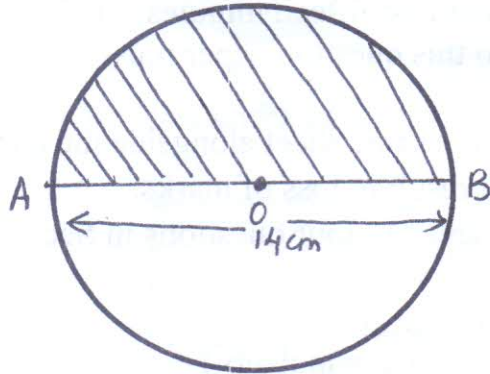
Represent the above data by using a pie chart.

- e) On increasing the price of a cycle by 14%, it becomes Rs.1,425. What was its original price? (3)  
f) For the given triangle, calculate the length of the unknown side. (3)



- g) Factorise  $16a^4 - \frac{1}{81}$  completely. (4)

h) Find the area of the shaded portion in the following figure. (3)



i) How much would 12 boxes of crayons cost if it is given that 9 boxes of crayons cost Rs.189. (3)

j) Solve the given simultaneous equation by cross multiplication method. (4)

$$3x - 4y = 9$$

$$3x + 5y = 36$$

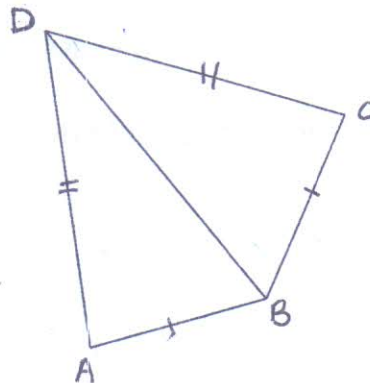
k) 'A' takes 9 minutes while 'B' takes 12 minutes to make a candle. Working together how long will A and B take to make 35 candles? (3)

l) Construct a rhombus ABCD given that  $AB = 4.5$  cm and  $\angle A = 60^\circ$ . Measure and write the length of the diagonal AC. (3)

Section II

(Attempt any four questions)

II a) In the adjoining figure,  $AB = BC$  and  $AD = CD$ . Prove: (i)  $\triangle ABD \cong \triangle CBD$  (4)  
(ii)  $\angle A = \angle C$



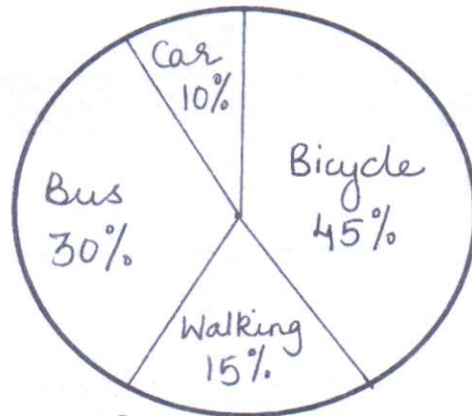
b) Factorise:  $(2m + n)^2 - (2m - n)^2$  (3)

c) A computer software retailer sold a computer game at a profit of 45%. Find the selling price of the computer game that cost the retailer Rs.310. (3)

III a) The weekly wages of 5 carpenters and 3 apprentices amount to Rs.1,880 and (4)  
The wages of 3 carpenters and 5 apprentices amount to Rs.1,640. Find the  
weekly wages of a carpenter and of an apprentice.

b) Expand:  $(3x - 2y + 1)^2$  (3)

c) The pie chart below shows the percentages of types of transportation used by (3)  
800 students to come to school. Read it carefully and answer the questions  
that follow:

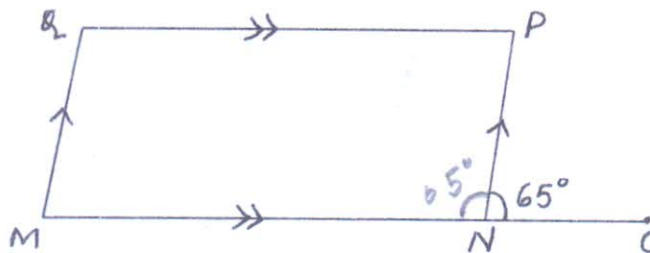


Types of Transportation

- 1) How many students come to school by bicycle?
- 2) How many students do not walk to school?
- 3) How many students come to school by bus or in a car?

IV a) A and B together can do a piece of work in 10 days, A and C together in (4)  
12 days, B and C together in 15 days. How long will each one take to do it  
alone?

b) From the given figure calculate the measure of  $\angle P$  and  $\angle Q$ . (3)



c) Construct the circumcircle of an equilateral triangle ABC of side 5 cm. Also (3)  
write the measure of its radius.

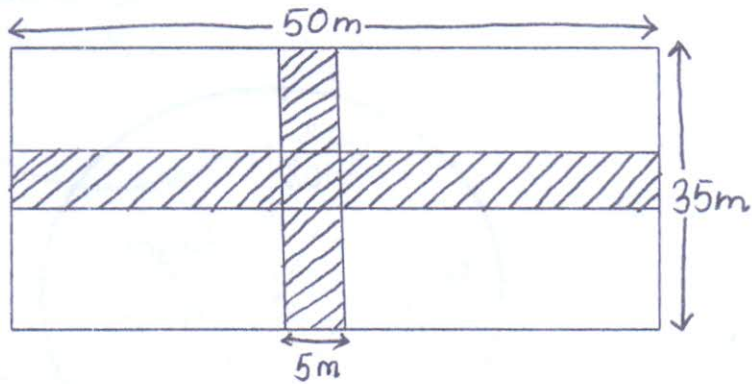
V a) Calculate the area of a triangle whose sides are 29 cm, 20 cm and 21 cm. (4)

b) 45% of the population of a town is females. If the total population of the (3)  
town is 54,320, find the population of males.

c) A pair of shoes marked at Rs.115 is being offered at Rs.92. Find the (3)  
discount percent being offered.

VI a) Solve  $3x - y = 7$ ;  $2x + 5y + 1 = 0$  graphically. Also, write the co-ordinates (4)  
of the point of intersection of those two lines.

b) In the given figure two paths are drawn inside a rectangular field 50 m long (3)  
and 35 m wide. The width of each path is 5 m. Find the total area of the paths.



c) If 20 men can dig a well in 16 days, how many men will be required to dig the (3)  
same well in 10 days?

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