



# Primrose Schools

ICSE Curriculum  
(A Unit of Primrose Educational Trust, Chennai)  
An ISO 9001:2015 Certified Institution

## State Purpose of Worksheet – II Term Examination [2018 - 2019]

[KG Class work/Home Assignment/Alternate Class work/Internal Assessment/Continuous Assessment/Unit Test/Cycle Test/Revision Test/Mid Term Examination/Term Examination/Preboard]

Name:	Std: VIII	Subject: Mathematics
Date:	Term: I	Topic: NA
Maximum Marks: 80	Time Duration: 2 ½ hr	Type of Assessment (if internal assessment): NA

*Answer to this paper must be written on the paper provided separately.*

*You will not be allowed to write during the **first 15 minutes**.*

*This time is to be spent in reading the question paper.*

*The time given at the head of this paper is the time allowed for writing the answers.*

*Attempt **all** the questions from **Section A** and **any four** questions from **Section B**.*

*All working, including rough work, must be clearly shown and must be done on the same sheet as the rest of the answer.*

*The intended marks for questions or parts of questions are given in brackets [ ].*

### Section A [40 Marks]

Attempt **all** questions

#### Question 1

	A copper wire when bent in the form of a square encloses an area of $121\text{cm}^2$ . If the same wire is bent into the form of circle, find the area of the circle.	
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#### Question 2

	If the area of a rhombus is $24\text{ cm}^2$ and one of its diagonals is 8 cm, find the perimeter of the rhombus.	[3]
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#### Question 3

	A rectangular park $50\text{m} \times 32\text{m}$ is being renovated and a grass bed is laid as shown in the figure. Find the area of the grass bed if its width is $10\text{m}$ . What will be the cost of fencing the park at the rate of ₹15 per metre?	[5]
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#### Question 4

	Find the side and the diagonal of a square whose area is $64 \text{ cm}^2$ .	
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#### Question 5

	Two sides of a triangle are 16cm and 14 cm, respectively. The length of the altitude to the longer side is 10cm. Find a) area of the triangle b) the length of the altitude to the other side.	
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#### Question 6

	How many times will the wheel of a car rotate in a journey of 88 km, given that the diameter of the wheel is 56 cm?	
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#### Question 7

	The circumference of two concentric circles are 132 cm and 176 cm. Find the width between the circles. ( $\pi = \frac{22}{7}$ )	
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#### Question 8

	Find the area of a ring whose outer and inner radii are 20 cm and 15 cm, respectively.	
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#### Question 9

	A die is rolled. Find the probability of getting a) An even number c) A number less than 3 b) A prime number d) A number which is multiple of 3	
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#### Question 10

	A bag contains 5 red, 10 black and 15 green balls. A ball is taken out at random. Find the probability that the ball taken out is:  a) a red ball b) a black ball c) not a black ball d) not a green ball	
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#### Question 11

	There are 15 beads in a necklace with 3 green, 4 red, 2 black and 6 white beads. A bead is picked at random with eyes closed. Find the probability of picking. a) a green bead b) a red bead c) a black bead d) a green or red bead	
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**Section B [40 Marks]**  
Attempt **any four** questions

**Question 12**

Factorize:

$$(3p + q)^2 + 3(3p + q) - 28(3p + q + 7)(3p + q - q)$$

**Question 13**

Solve :

$$\begin{aligned} \text{i) } & \frac{3y-5}{6} + \frac{8+2y}{3} = \frac{3}{2} \\ \text{ii) } & \frac{x+3}{2} - \frac{7x-4}{2} = \frac{x}{2} - 7 \end{aligned}$$

**Question 14**

Simplify

- i)  $(l^{a+b})^{b-a} \times (l^{b+c})^{c-b} \times (l^{c+a})^{a-c}$
- ii)  $\sqrt[5]{x^{30}y^{-15}z^5}$
- iii)  $\left[ \frac{3p^3q^2r^{-3}}{2p^{-2}q^3} \right]^3 \div (2p^3r)^{-1}$
- iv)  $\left( \frac{x^a}{x^b} \right)^{-(a+b)} \times \left( \frac{x^b}{x^c} \right)^{-(b+c)} \times \left( \frac{x^c}{x^a} \right)^{-(c+a)}$
- v)  $\left( \frac{x^a}{x^b} \right)^{(a+b)} \times \left( \frac{x^b}{x^c} \right)^{b-c} \times \left( \frac{x^c}{x^a} \right)^{c+a}$
- vi) If  $a=2^x$  and  $b=2^{x+1}$ , simplify a)  $a^2b$ , b)  $4a^3 \div 2^3b^2$

**Question 15**

Solve:

$$\frac{2(t+1)}{3} - \frac{t-2}{4} = \frac{t}{2} + \frac{1}{2}$$

**Question 16**

If half of a no added to three-fourth of a no gives  $\frac{25}{2}$ , find the number.

**Question 17**

Compute using suitable forms of exponents

- i)  $\frac{a^{7+2n} \times (a^2)^{3n+2}}{(a^4)^{2n+3}}$
- ii)  $(64)^{1/3} + \sqrt[3]{256} + 100^\circ + \frac{1}{2^{-5}} + (64)^{\frac{-2}{3}} + \left( \frac{25}{9} \right)^{\frac{-1}{2}}$

**Question 17**

In a quad ABCD,  $AB \parallel DC$ . If  $AB = 25$  cm,  $DC = 10$  cm and the length of non-parallel sides AD and BC are 14 cm and 13 cm respectively. Find the area of quad ABCD.

**Question 17**

- i) What is the probability of choosing a vowel from the English alphabet?
- ii) An number from 1 to 11 is chosen at random. What is the probability of choosing an odd number?
- iii) When a dice is rolled, list the possible outcomes.
  - a) What is the probability of getting a number less than 4?
  - b) Probability of getting a prime number?
  - c) Probability of getting a number greater than 2?
  - d) Probability of getting a number less than 5?
- iv) A bag contains slips on which English alphabets a,b,c..... x,y,z are written. If one slip is taken out, what is the probability that the slip contains
  - a) Vowel b) a constant c) the letter 'm'