THE PUNJAB SCHOOL
DRC-JTC

Practice worksheet-1

Self-Assessment-Summer 2020

Math:-1 **Class-IX** **Marks: 50**

Q1: Choose the correct option. **/12**

Q.	Questions	A	B	C	D
i.	Which of the following is called Recurring decimal fraction?	$\sqrt{17}$	π	1/6	$\sqrt{3}$
ii.	$0.\overline{45}$ = _____	45/100	45/99	45/10	44/100
iii.	Real part of $-i(3i+2)$ is	3	-3	2	-2
iv.	The value of i^{101} is _____.	1	-1	i	$-i$
v.	Medians of a triangle are :	Parallel	Perpendicular	Concurrent	None of these
vi.	Diagonal of a parallelogram divides the parallelogram into two _____ triangles.	Right angled	Congruent	concurrent	Equilateral
vii.	Set of Real numbers is:	Q	Q'	$Q \cap Q'$	$Q \cup Q'$
viii.	For all x,y,z∈R, z<0 and x>y then	xz<yz	xz>yz	xz=yz	none
ix.	For each prime number P, $\sqrt{P}$ is an _____ number.	Rational	Irrational	Natural	Whole
x.	The decimal representations of rational numbers are of _____ types	Four	Three	Two	One
xi.	The right bisector of sides of an obtuse triangle intersect each other _____ the triangle	At vertex	Outside	Hypotenuse of	Inside
xii.	Any point on the bisector of an angle is _____ from its arms.	Equal	Congruent	Equidistant	Not equal

Necessary Reminder (for):
A. Impression Areas: 1. Margin 2. Question title 3. Use of Marker 4. Headings 5. No fluid/cutting/over writing
B. Attempt Areas 1. All questions & parts 2. Complete answers 3. Labeled & titled diagram 4. Review
N.B. There will be negative marking with respect to impression areas.

PART-I

Q2: Write short answers of any FOUR questions. **/4× 2=8**

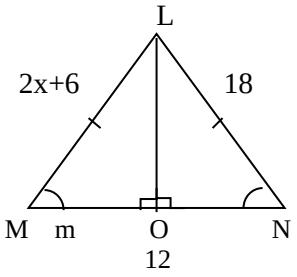
i. Define Conjugate of Complex numbers. Give two examples.

ii. Simplify $\left(2-\sqrt{-4}\right)\left(3-\sqrt{-4}\right)$ and write your answer in the form a + *i*b

iii. Separate real and imaginary parts from $(-1+\sqrt{-2})^2$.

iv. Express $0.\overline{67}$ in the form of $\frac{p}{q}$, where p, q ∈ Z and q ≠ 0

v. In given congruent triangles LMO and LNO, find the unknowns x and m.



Q3: Write short answers of any FOUR questions. **/4× 2=8**

i. Represent $-1\frac{7}{9}$ on number line.

ii. Give a rational number between $\frac{3}{4}$ and $\frac{5}{9}$.

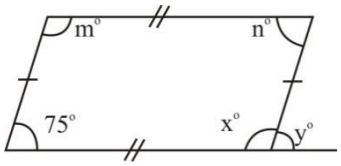
iii. Simplify $x^{3^2} \div (x^3)^2$.

iv. One exterior angle of a parallelogram is 40º. Find the measure of its remaining angles.

v. State multiplicative property of inequality of real numbers.

Q4: Write short answers of any THREE questions. **/3× 2=6**

i. Find the unknowns in the given figure.



ii. Simplify and write your answer in the form $a+bi$, $\frac{9-7i}{3+i}$

iii. Simplify by using laws of indices $\frac{4(3)^n}{3^{n+1}-3^n}$

iv. Show that: $\left(\frac{x^a}{x^b}\right)^{a+b} \times \left(\frac{x^b}{x^c}\right)^{b+c} \times \left(\frac{x^c}{x^a}\right)^{c+a} = 1$

PART-II

Q5: a) Simplify $\sqrt{\frac{(216)^{2/3} \times (25)^{1/2}}{(0.04)^{-1/2}}}$ **/4**

b) Simplify $\frac{(81)^n.3^5 - 3^{4n-1}.(243)}{9^{2n}.3^3}$ **/4**

Q6: Prove that:
The right bisector of the sides of a triangle are concurrent. **/8**