INDIAN LEARNERS OWN ACADEMY, KUWAIT

Class	: XI	Subject	: Mathematics
Assignment by	: Mrs. Nusrat Unnisa	Topic / Lesson	: Number Systems

Assignment Questions:-

1) Find five rations numbers between 1 and 2?

2) Find three rational numbers between

a. ½ and ¾ b. $\frac{1}{5}$ and $\frac{1}{3}$ c. $\frac{-2}{5}$ and $\frac{1}{5}$

3) Represent $\sqrt{5}$, $\sqrt{6}$ and 7 on number line?

4) a) Find $\sqrt{x}$ geometrically where 'x' is a positive real number.
b) Also find the position of $\sqrt{x}$ on the number line.

5) Represent i) $\sqrt{11}$ ii) $\sqrt{18}$, on number line.

6) Represent geometrically the following on number line

i) $\sqrt{3.5}$ ii) $\sqrt{4.8}$

7) Visualise 1.986 on the number line using successive magnification.

8) Write the following in decimal form and say what kind of decimal expansion each has

i) $\frac{54}{100}$ ii) $\frac{31}{32}$ iii) $\frac{4}{23}$ iv) $\frac{1}{9}$

9) You know that $\frac{1}{11} = 0.\overline{09}$. Can you predict what the decimal expansions of $\frac{2}{11}$, $\frac{3}{11}$, $\frac{4}{11}$, $\frac{5}{11}$, $\frac{6}{11}$ are without actually doing the long division? If so, how?

10) Express the following in the form of $\frac{p}{q}$, where p and q are integers and q≠ 0

i) $0.\overline{3}$ ii) $0.\overline{18}$ iii) $2.\overline{317}$

11) Classify the following numbers as rational or irrational

i) $\sqrt{576}$ iii) 3.123123…..

ii) $\sqrt{48}$ iv) 0.401400140014…..

12) Simplify each of the following expression

i) $(8 + \sqrt{3})(8 - \sqrt{3})$ iii) $(2 + \sqrt{7})(3 + \sqrt{5})$

ii) $(\sqrt{7} - \sqrt{3})(\sqrt{7} + \sqrt{3})$ iv) $(\sqrt{7} + \sqrt{5})^2$

13) Rationalise the denominators of the followings

i) $\frac{1}{\sqrt{5}}$ ii) $\frac{1}{\sqrt{6}-1}$ iii) $\frac{1}{7+3\sqrt{3}}$ iv) $\frac{2}{\sqrt{6}-\sqrt{5}}$

14) Find i) $(81)^{1/2}$ ii) $(64)^{1/3}$ iii) $(243)^{1/5}$ iv) $(216)^{-2/3}$

15) Simplify i) $3^{1/2}\ 4^{1/2}$ ii) $\left(\frac{81}{16}\right)^{-3/4}$