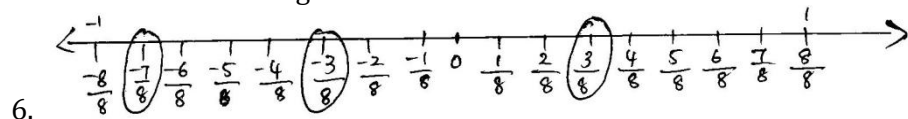


I. Answer the following:

1.  $(-3)^2 = 9$     2.  $a^{m-n}$     3. 1    4. Numberline    5. Infinite

II. Answer the following:



7.  $\frac{1}{2}$  and  $\frac{1}{5}$

LCM of 2 and 5 is 10.

$$\frac{1}{2} \times \frac{5}{5} = \frac{5}{10} \quad \frac{1}{5} \times \frac{2}{2} = \frac{2}{10} = \frac{2}{10} \left[ \frac{3}{10}, \frac{4}{10} \right] \frac{5}{10}$$

There are only two rational numbers.

To find: Five Rational numbers.

$$\frac{5}{10} \times \frac{2}{2} = \frac{10}{20} = \frac{2}{10} \times \frac{2}{2} = \frac{4}{20}$$

$$\frac{4}{20} \left[ \frac{5}{20}, \frac{6}{20}, \frac{7}{20}, \frac{8}{20}, \frac{9}{20} \right] \frac{10}{20}$$

The five rational numbers between  $\frac{1}{2}$  and  $\frac{1}{5}$  are

$$\frac{5}{20}, \frac{6}{20}, \frac{7}{20}, \frac{8}{20}, \frac{9}{20} \text{ (or) (Refer Student's answer also)}$$

8.

$$(4^0 + 5^{-1}) \times 5^2$$

$$= \left( 4^0 + \frac{1}{5} \right) \times 5^2 \left( \because a^{-m} = \frac{1}{a^m} \right)$$

$$= \left( 1 + \frac{1}{5} \right) \times 5^2 \left( \because a^0 = 1 \right)$$

$$= \left( 1 + \frac{1}{5} \right) \times 5^2$$

$$= \frac{6}{5} \times 5 \times 5 = 30 \quad \text{Ans: 30}$$

9. 
$$\left\{ \left( \frac{1}{6} \right)^{-1} - \left( \frac{1}{3} \right)^{-1} \right\}^{-1}$$

$$= \left\{ (6)^1 - (3)^1 \right\}^{-1} \left( \because a^{-m} = \frac{1}{a^m} \right) = \{6-3\}^{-1}$$

$$= \{3\}^{-1} = \frac{1}{3} \left( \because a^{-m} = \frac{1}{a^m} \right) = \text{Ans} = \frac{1}{3}$$

10. Soln.

$$2 \text{ can be written as } \frac{8}{4}$$

$\therefore$  Five Rational Numbers greater than 2 are,  $\frac{9}{4}, \frac{10}{4}, \frac{11}{4}, \frac{12}{4}, \frac{13}{4}$

Refer (Student's Answer also)