

## IX Homework-1 MCQs - NUMBER SYSTEMS

- 1) Which of the following is a rational number?  
(a)  $\pi$  (b) 0 (c)  $1+\sqrt{3}$  (d)  $2\sqrt{3}$
- 2) Which of the following is the product of  $\frac{7}{8}$  and  $-\frac{4}{21}$ ?  
(a)  $-\frac{1}{6}$  (b)  $\frac{1}{12}$  (c)  $-\frac{16}{63}$  (d)  $-\frac{147}{16}$
- 3) Between two rational numbers there are/is  
(a) exactly one rational number  
(b) infinitely many rational number  
(c) many irrational numbers  
(d) only irrational numbers
- 4) The product of a rational and an irrational number is  
(a) always an integer (b) always a rational number  
(c) always an irrational number  
(d) sometimes rational and sometimes irrational
- 5) Can we write 0 in the form  $\frac{p}{q}$ ?  
(a) Yes (b) No (c) cannot be explained (d) none of these
- 6) The three rational numbers between 3 and 4 are  
(a)  $\frac{5}{2}, \frac{6}{2}, \frac{7}{2}$  (b)  $\frac{13}{4}, \frac{14}{4}, \frac{15}{4}$  (c)  $\frac{12}{7}, \frac{13}{7}, \frac{14}{7}$  (d)  $\frac{11}{4}, \frac{12}{4}, \frac{13}{4}$
- 7) Decimal representation of a rational number cannot be  
(a) terminating  
(b) always terminating  
(c) always non-terminating  
(d) non-terminating non-repeating
- 8) All integers are  
(a) whole numbers (b) rational numbers  
(c) irrational numbers (d) natural numbers
- 9) Every real number is  
(a) neither rational nor irrational  
(b) irrational  
(c) rational  
(d) either rational or irrational
- 10) The rational number between 1 and 2 is  
(a)  $\frac{3}{2}$  (b)  $\frac{7}{2}$  (c)  $\frac{5}{2}$  (d)  $\frac{1}{2}$



- 11) Which of the following numbers has the terminating decimal representation?  
 (a)  $\frac{1}{7}$  (b)  $\frac{1}{3}$  (c)  $\frac{3}{5}$  (d)  $\frac{17}{3}$
- 12) The value of 0.423 is (a)  $\frac{423}{1000}$  (b)  $\frac{423}{100}$  (c)  $\frac{423}{990}$  (d)  $\frac{419}{990}$
- 13) A rational number equivalent to a rational number  $\frac{7}{19}$  is  
 (a)  $\frac{17}{119}$  (b)  $\frac{14}{57}$  (c)  $\frac{21}{38}$  (d)  $\frac{21}{57}$
- 14) Value of  $x$  satisfying  $\sqrt{x+3} + \sqrt{x-2} = 5$  is  
 (a) 6 (b) 7 (c) 8 (d) 9
- 15) Four rational numbers between 3 and 4 are  
 (a)  $\frac{3}{5}, \frac{4}{5}, 1, \frac{6}{5}$  (b)  $\frac{13}{5}, \frac{14}{5}, \frac{16}{5}, \frac{17}{5}$   
 (c) 3.1, 3.2, 4.1, 4.2 (d) 3.1, 3.2, 3.8, 3.9
- 16) The rational number between  $\frac{1}{2}$  and  $\frac{1}{3}$  is  
 (a)  $\frac{2}{5}$  (b)  $\frac{1}{5}$  (c)  $\frac{3}{5}$  (d)  $\frac{4}{5}$
- 17) A rational number between  $\sqrt{2}$  and  $\sqrt{3}$  is  
 (a)  $\frac{\sqrt{2} + \sqrt{3}}{2}$  (b)  $\frac{\sqrt{2} - \sqrt{3}}{2}$  (c) 1.5 (d) 1.8
- 18) Every rational number is  
 (a) natural number (b) an integer  
 (c) a real number (d) a whole number
- 19) Between two rational numbers  
 (a) there is no rational number  
 (b) there is exactly one rational number  
 (c) there are infinitely many rational numbers  
 (d) there are only rational numbers and no irrational numbers
- 20) The decimal expansion of  $\sqrt{2}$  is  
 (a) finite decimal  
 (b) 1.41421  
 (c) non-terminating recurring  
 (d) non-terminating non-recurring.



# IX Homework - 1 MCQs - Number Systems (answers)

- 1) 0 (b)
- 2)  $\frac{7^1}{8^2} \times \frac{-4^1}{2+3} = -\frac{1}{6}$  (a)
- 3) infinitely many rational numbers (b)
- 4) sometimes rational sometimes irrational (d)
- 5) yes (a)
- 6)  $\frac{3 \times 4}{1 \times 4} = \frac{12}{4}$        $\frac{4 \times 4}{1 \times 4} = \frac{16}{4}$        $\therefore \frac{13}{4}, \frac{14}{4}, \frac{15}{4}$  (b)
- 7) non-terminating non-repeating (d)
- 8) rational numbers (b)
- 9) either rational or irrational (d)
- 10)  $\frac{1+2}{2} = \frac{3}{2}$  (a)
- 11)  $\frac{3}{5} = 0.6$  (c)
- 12)  $0.423 = \frac{423}{1000}$  (a)
- 13)  $\frac{7 \times 3}{19 \times 3} = \frac{21}{57}$  (d)
- 14) When  $x = 6$ ,  $\sqrt{x+3} + \sqrt{x-2}$   
 $= \sqrt{6+3} + \sqrt{6-2} = \sqrt{9} + \sqrt{4} = 3+2 = 5$  (a)
- 15) 3.1, 3.2, 3.8, 3.9 (d)
- 16)  $\frac{1}{2} = 0.5$        $\frac{2}{5} = 0.4$  (a)  
 $\frac{1}{3} = 0.\bar{3}$
- 17)  $\sqrt{2} = 1.414 \dots$        $\therefore 1.5$  (c)  
 $\sqrt{3} = 1.732 \dots$
- 18) a real number (c)
- 19) there are infinitely many rational numbers (c)
- 20) non-terminating non-recurring (d)