



**VIDYA BHARATI SCHOOL**  
OLYMPIAD WORKSHEET: Apr- 2017  
GRADE: IX  
SUBJECT: MATHEMATICS

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1. Which of the following is irrational  
(a)  $\sqrt{\frac{4}{9}}$                       (b)  $\frac{4}{5}$                       (c)  $\sqrt{7}$                       (d)  $\sqrt{81}$
2. Which of the following is rational  
(a)  $\sqrt{3}$                       (b)  $\pi$                       (c)  $\frac{4}{0}$                       (d)  $\frac{0}{4}$
3. Which of the following will represent a non-terminating repeating decimal.  
(a)  $\frac{39}{24}$                       (b)  $\frac{3}{16}$                       (c)  $\frac{3}{11}$                       (d)  $\frac{137}{25}$
4. An irrational number between 2 and 2.5 is  
(a)  $\sqrt{11}$                       (b)  $\sqrt{5}$                       (c)  $\sqrt{22.5}$                       (d)  $\sqrt{12.5}$
5.  $\frac{p}{q}$  form of  $1.\overline{27}$  is represented by  
(a)  $\frac{14}{9}$                       (b)  $\frac{14}{11}$                       (c)  $\frac{14}{13}$                       (d)  $\frac{14}{15}$
6. If n is a natural number then  $\sqrt{n}$  is  
(a) Always a natural number                      (b) Always an irrational number  
(b) Always rational number                      (d) An irrational number
7. Every point on number line represents  
(a) real number                      (b) A natural number  
(c) A rational number                      (d) An irrational number
8. Number of consecutive zeros in  $2^3 \times 3^4 \times 5^4 \times 7$  is  
(a) 3                      (b) 2  
(c) 4                      (d) 5
9. Value of  $0.\overline{23} + 0.\overline{22}$  is  
(a)  $0.\overline{45}$                       (b)  $0.\overline{43}$                       (c)  $0.\overline{45}$                       (d) 0.45
10. The value  $[2 - 3(2 - 3)^3]^3$  is

- (a) 5                      (b) 125                      (c)  $\frac{1}{5}$                       (d) -125
11.  $(256)^{0.16} \times (256)^{0.9}$  is  
 (a) 4                      (b) 16                      (c) 64                      (d) 256.25
12.  $102y = 225$  then  $10-y$  equal to  
 (a)  $-\frac{1}{5}$                       (b)  $\frac{1}{50}$                       (c)  $\frac{1}{625}$                       (d)  $\frac{1}{5}$
13. Seventh root of x is divided by eight root of x is  
 (a) x                      (b)  $\sqrt{x}$                       (c)  $\sqrt[56]{x}$                       (d)  $\frac{1}{\sqrt[56]{x}}$
14.  $(x^{-1}+y^{-1})^{-1}$  is equal to  
 (a) xy                      (b) x + y                      (c)  $\frac{xy}{x+y}$                       (d)  $\frac{x+y}{xy}$
15. If  $x^{-2} = 65$  then  $x^{1/3} + x^0 =$   
 (a) 2                      (b) 3                      (c)  $\frac{3}{2}$                       (d)  $\frac{2}{3}$
16. The rationalization factor of  $2 + \sqrt{3}$  is  
 (a)  $2 - \sqrt{3}$                       (b)  $\sqrt{2} + 3$                       (c)  $\sqrt{2} - 3$                       (d)  $\sqrt{3} - 2$
17. Simplest rationalizing factor of  $\sqrt[3]{500}$  is  
 (a)  $\sqrt[3]{2}$                       (b)  $\sqrt[3]{5}$                       (c)  $\sqrt{2}$                       (d)  $\sqrt[3]{10}$
18. Value of  $\sqrt{3+2\sqrt{2}}$  is  
 (a)  $\sqrt{2} + 1$                       (b)  $\sqrt{2} - 1$                       (c)  $\sqrt{3} + 1$                       (d)  $\sqrt{3} - 1$
19.  $\sqrt{13-a\sqrt{10}} = \sqrt{8} + \sqrt{5}$  then a =  
 (a) -5                      (b) -6                      (c) -4                      (d) -2
20. if  $X = 2 + \sqrt{3}$  then value of  $x + \frac{1}{x}$   
 (a) 3                      (b) 4                      (c) -3                      (d)  $2\sqrt{3}$

\*For more practice material please click: [www.brilliant.org](http://www.brilliant.org); [www.sofolympiadtrainer.co](http://www.sofolympiadtrainer.co)  
[www.olympiadhelper.com](http://www.olympiadhelper.com)