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Department of Mathematics, 2020-2021

CLASS: IX   Chapter - 1 – Number System   20-04-2021

Q.1.	Which of the following is irrational?						
	A	$\sqrt{\dfrac{4}{9}}$	**B**	$\dfrac{\sqrt{12}}{\sqrt{3}}$	**C**	$\sqrt{5}$	**D**	$\sqrt{81}$

Q.2.	$4\sqrt{5} + 5\sqrt{5}$ is equal to:						
	A	$9\sqrt{5}$	**B**	$9\sqrt{10}$	**C**	$5\sqrt{10}$	**D**	$7\sqrt{50}$

Q.3.	Which of the following is irrational?						
	A	0.4014001400014…	**B**	0.14	**C**	$0.\overline{1416}$	**D**	$0.14\overline{16}$

Q.4.	$\sqrt{12} \times \sqrt{15}$ is equal to:						
	A	a) $5\sqrt{6}$	**B**	$6\sqrt{5}$	**C**	$10\sqrt{5}$	**D**	$\sqrt{25}$

Q.5.	Which of the following is equal to x^2?						
	A	$x^{\frac{12}{7}} - x^{\frac{5}{7}}$	**B**	$\sqrt[12]{\left(x^4\right)^{\frac{1}{3}}}$	**C**	$\left(\sqrt{x^3}\right)^{\frac{2}{3}}$	**D**	$x^{\frac{2}{4}} \times x^{\frac{6}{4}}$

Q.6.	The value of $\sqrt[4]{(16)^{-2}}$ is:						
	A	1/4	**B**	1/2	**C**	4	**D**	1/16

Q.7.	Value of $(256)^{0.16} \times (256)^{0.09}$ is:						
	A	4	**B**	16	**C**	64	**D**	256.25

Q.8.	The rational number 0.333… can also be written as						
	A	0.3	**B**	3/10	**C**	0.33	**D**	

Q.9.	The sum of the powers of the prime factors in 108 x 192							
	A	5	B	7	C	8	D	12

Q.10	If $\sqrt{2} = 1.414$ then the value of $\dfrac{5+\sqrt{2}}{5-\sqrt{2}}$ is							
	A	1.828	B	1.787	C	1.525	D	1.326

Q.11 If $\sqrt{3} = 1.732$ and $\sqrt{2} = 1.414$, find the value of $\dfrac{1}{\sqrt{3}-\sqrt{2}}$

Q12. The sum of $0.\overline{3}$ and $0.\overline{2}$ is

Q13. If $8^x = \dfrac{64}{2^x}$ then find the value of x.

Q14. Find the value of p if $5^{p-3} \times 3^{2p-8} = 225$.

Q15. Simplify: $\dfrac{3\sqrt{2}}{\sqrt{6}-\sqrt{3}} - \dfrac{4\sqrt{3}}{\sqrt{6}-\sqrt{2}} + \dfrac{2\sqrt{3}}{\sqrt{6}+2}$

Q16. Prove that $\dfrac{1}{\sqrt{4}+\sqrt{5}+} + \dfrac{1}{\sqrt{5}+\sqrt{6}} + \dfrac{1}{\sqrt{6}+\sqrt{7}} + \dfrac{1}{\sqrt{7}+\sqrt{8}} + \dfrac{1}{\sqrt{8}+\sqrt{9}} = 1$.

Q17. Find the value of a and b if $a + b\sqrt{15} = \dfrac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}}$

Q18. Simplify $\sqrt[4]{81} - 8.\sqrt[3]{216} + 15.\sqrt[5]{32} + \sqrt{225}$

Q19. Find the value of a and b, if $\dfrac{\sqrt{3}-1}{\sqrt{3}+1} = a + b\sqrt{3}$ is

Q20. If $\sqrt{3} = 1.732$, find the value of $\dfrac{1}{\sqrt{3}-1}$

Answers	1	C	2	A	3.	A	4	B
	5	D	6	A	7	A	8	D
	9	D	10	B	11	3.146	12	5/9
	13	3/2	14	5	15	0	16	
	17	a=4 & b=1	18	0	19	a=2 and b= -1	20	1.366