

SHIVALIK

Medical/IIT-JEE/Foundation
NEET & AIIMS/ IIT JEE-2021-23
Practice Sheet -1 (XI Appearing)

TOPIC:- Exponents and Radicals (घात और मूलक)

- The value of $(\frac{2}{5})^{-3}$ is :-
(1) $\frac{-8}{25}$ (2) $\frac{25}{4}$ (3) $\frac{125}{8}$ (4) $\frac{-2}{5}$
- The value of $(-3)^{-4}$ is :-
(1) 12 (2) 81 (3) $\frac{-1}{12}$ (4) $\frac{1}{81}$
- The value of $(\frac{-3}{8})^{-3} \times (\frac{4}{9})^{-2}$ is :-
(1) -96 (2) $\frac{-8192}{2187}$ (3) $\frac{1}{96}$ (4) $\frac{-1}{192}$
- The value of $\{(\frac{4}{-3})^{-3}\}^2$ is :-
(1) $\frac{-3}{4}$ (2) $\frac{3}{4}$ (3) $\frac{729}{4096}$ (4) $\frac{1024}{243}$
- The value of $(3^{-1} + 4^{-1})^{-1} \div 5^{-1}$ is :-
(1) $\frac{60}{7}$ (2) $\frac{12}{35}$ (3) $\frac{7}{5}$ (4) $\frac{7}{15}$
- Simplify :- $(\frac{1}{2})^{-2} + (\frac{2}{3})^{-2} + (\frac{3}{4})^{-2}$
(1) $\frac{289}{36}$ (2) $\frac{241}{36}$ (3) $\frac{27}{4}$ (4) $\frac{313}{72}$
- The value of x for which $(\frac{7}{12})^{-4} \times (\frac{7}{12})^{3x} = (\frac{7}{12})^5$ is :-
(1) -1 (2) 1 (3) 2 (4) 3
- If $(2^{3x-1} + 10) \div 7 = 6$, then x is equal to :-
(1) -2 (2) 0 (3) 1 (4) 2
- $[\{(\frac{-1}{2})^2\}^{-2}]^{-1} = \dots\dots\dots$
(1) $\frac{1}{16}$ (2) 16 (3) $\frac{-1}{16}$ (4) -16
- $\{(\frac{1}{3})^{-3} - (\frac{1}{2})^{-3}\} \div (\frac{1}{4})^{-3} = \dots\dots\dots$
(1) $\frac{19}{64}$ (2) $\frac{27}{16}$ (3) $\frac{64}{19}$ (4) $\frac{16}{25}$
- The simplest radical form of the radical expression $\sqrt{200}$ is :-
(1) 100 (2) $10\sqrt{2}$ (3) $50\sqrt{2}$ (4) $25\sqrt{2}$
- The simplest radical form of the radical expression $\sqrt[3]{16y^6}$ is :-
(1) $8y^3\sqrt{2y^3}$ (2) $2y^3\sqrt{2y^3}$
(3) $2y^2\sqrt[3]{2}$ (4) $2y\sqrt{2}$
- The simplest radical form of the radical expression $2\sqrt[3]{32m^5n^7}$ is :-
(1) $4mn^2\sqrt[3]{4m^2n}$ (2) $8mn^2\sqrt[3]{4m^2n}$
(3) $2m^3n^6\sqrt[3]{4m^2n}$ (4) $4m^3n^6\sqrt[3]{4m^2n}$

- $(\frac{2}{5})^{-3}$ का मान है :-
(1) $\frac{-8}{25}$ (2) $\frac{25}{4}$ (3) $\frac{125}{8}$ (4) $\frac{-2}{5}$
- $(-3)^{-4}$ का मान है :-
(1) 12 (2) 81 (3) $\frac{-1}{12}$ (4) $\frac{1}{81}$
- $(\frac{-3}{8})^{-3} \times (\frac{4}{9})^{-2}$ का मान है :-
(1) -96 (2) $\frac{-8192}{2187}$ (3) $\frac{1}{96}$ (4) $\frac{-1}{192}$
- $\{(\frac{4}{-3})^{-3}\}^2$ का मान है :-
(1) $\frac{-3}{4}$ (2) $\frac{3}{4}$ (3) $\frac{729}{4096}$ (4) $\frac{1024}{243}$
- $(3^{-1} + 4^{-1})^{-1} \div 5^{-1}$ का मान है :-
(1) $\frac{60}{7}$ (2) $\frac{12}{35}$ (3) $\frac{7}{5}$ (4) $\frac{7}{15}$
- सरल करो :- $(\frac{1}{2})^{-2} + (\frac{2}{3})^{-2} + (\frac{3}{4})^{-2}$
(1) $\frac{289}{36}$ (2) $\frac{241}{36}$ (3) $\frac{27}{4}$ (4) $\frac{313}{72}$
- x का मान होगा, जबकि $(\frac{7}{12})^{-4} \times (\frac{7}{12})^{3x} = (\frac{7}{12})^5$:-
(1) -1 (2) 1 (3) 2 (4) 3
- यदि $(2^{3x-1} + 10) \div 7 = 6$, तब x बराबर है :-
(1) -2 (2) 0 (3) 1 (4) 2
- $[\{(\frac{-1}{2})^2\}^{-2}]^{-1} = \dots\dots\dots$
(1) $\frac{1}{16}$ (2) 16 (3) $\frac{-1}{16}$ (4) -16
- $\{(\frac{1}{3})^{-3} - (\frac{1}{2})^{-3}\} \div (\frac{1}{4})^{-3} = \dots\dots\dots$
(1) $\frac{19}{64}$ (2) $\frac{27}{16}$ (3) $\frac{64}{19}$ (4) $\frac{16}{25}$
- मूल व्यंजक $\sqrt{200}$ का सरलतम मूलक रूप है :-
(1) 100 (2) $10\sqrt{2}$ (3) $50\sqrt{2}$ (4) $25\sqrt{2}$
- मूलक व्यंजक $\sqrt[3]{16y^6}$ का सरलतम मूलक रूप है :-
(1) $8y^3\sqrt{2y^3}$ (2) $2y^3\sqrt{2y^3}$
(3) $2y^2\sqrt[3]{2}$ (4) $2y\sqrt{2}$
- मूलक व्यंजक $2\sqrt[3]{32m^5n^7}$ का सरलतम मूलक रूप है :-
(1) $4mn^2\sqrt[3]{4m^2n}$ (2) $8mn^2\sqrt[3]{4m^2n}$
(3) $2m^3n^6\sqrt[3]{4m^2n}$ (4) $4m^3n^6\sqrt[3]{4m^2n}$

14. The simplest form of radical expression $\sqrt[3]{\frac{3}{4}}$ is :-

- (1) $\sqrt[3]{\frac{3}{4}}$ (2) $\frac{\sqrt[3]{12}}{4}$ (3) $\frac{\sqrt[3]{6}}{2}$ (4) $\frac{\sqrt[3]{48}}{4}$

15. The simplest radical form of radical expression $\sqrt{\frac{4r^8}{t^9}}$ is :-

- (1) $\frac{29r^4}{t^4\sqrt{t}}$ (2) $\frac{2r^4\sqrt{t}}{t^5}$ (3) $\frac{2r^4t^4\sqrt{t}}{t^9}$ (4) $\frac{2r^2\sqrt{t^9}}{t^9}$

16. The simplest radical form of radical expression $(2\sqrt{32}) (-3\sqrt{20})$ is :-

- (1) $-48\sqrt{10}$ (2) $-384\sqrt{10}$ (3) $-6\sqrt{640}$ (4) -480

17. The simplest form of the expression $\sqrt{12} + \sqrt{75} - \sqrt{27}$ is :-

- (1) $20\sqrt{34}$ (2) $4\sqrt{3}$ (3) $\sqrt{60}$ (4) $2\sqrt{15}$

18. The simplest radical form of the expression $(\sqrt{11} - \sqrt{2})^2$ is :-

- (1) 9 (2) $9 - \sqrt{22}$ (3) $13 - \sqrt{22}$ (4) $13 - 2\sqrt{22}$

19. The simplest radical form of the expression $(3 + \sqrt{7})(2 + \sqrt{6})$ is

- (1) $6+10\sqrt{6} + 8\sqrt{7}$ (2) $6 + 18\sqrt{13}$
(3) $36 + 2\sqrt{13}$ (4) $6 + 3\sqrt{6} + 2\sqrt{7} + \sqrt{42}$

20. The simplest radical form of expression $\frac{\sqrt{6}}{5+\sqrt{3}}$ is :-

- (1) $\frac{5\sqrt{6}-\sqrt{18}}{22}$ (2) $\frac{5\sqrt{6}-3\sqrt{2}}{22}$
(3) $\frac{5\sqrt{6}+\sqrt{18}}{22}$ (4) $\frac{5\sqrt{6}+3\sqrt{2}}{22}$

14. मूलकव्यंजक $\sqrt[3]{\frac{3}{4}}$ का सरलतम रूप है :-

- (1) $\sqrt[3]{\frac{3}{4}}$ (2) $\frac{\sqrt[3]{12}}{4}$ (3) $\frac{\sqrt[3]{6}}{2}$ (4) $\frac{\sqrt[3]{48}}{4}$

15. मूलकव्यंजक $\sqrt{\frac{4r^8}{t^9}}$ का सरलतम मूलक रूप है :-

- (1) $\frac{29r^4}{t^4\sqrt{t}}$ (2) $\frac{2r^4\sqrt{t}}{t^5}$ (3) $\frac{2r^4t^4\sqrt{t}}{t^9}$ (4) $\frac{2r^2\sqrt{t^9}}{t^9}$

16. मूलकव्यंजक $(2\sqrt{32}) (-3\sqrt{20})$ का सरलतम मूलक रूप है :-

- (1) $-48\sqrt{10}$ (2) $-384\sqrt{10}$ (3) $-6\sqrt{640}$ (4) -480

17. व्यंजक $\sqrt{12} + \sqrt{75} - \sqrt{27}$ का सरलतम मूलक रूप है :-

- (1) $20\sqrt{34}$ (2) $4\sqrt{3}$ (3) $\sqrt{60}$ (4) $2\sqrt{15}$

18. व्यंजक $(\sqrt{11} - \sqrt{2})^2$ का सरलतम मूलक रूप है :-

- (1) 9 (2) $9 - \sqrt{22}$ (3) $13 - \sqrt{22}$ (4) $13 - 2\sqrt{22}$

19. व्यंजक $(3 + \sqrt{7})(2 + \sqrt{6})$ का सरलतम मूलक रूप है :-

- (1) $6+10\sqrt{6} + 8\sqrt{7}$ (2) $6 + 18\sqrt{13}$
(3) $36 + 2\sqrt{13}$ (4) $6 + 3\sqrt{6} + 2\sqrt{7} + \sqrt{42}$

20. व्यंजक $\frac{\sqrt{6}}{5+\sqrt{3}}$ का सरलतम मूलक रूप है :-

- (1) $\frac{5\sqrt{6}-\sqrt{18}}{22}$ (2) $\frac{5\sqrt{6}-3\sqrt{2}}{22}$
(3) $\frac{5\sqrt{6}+\sqrt{18}}{22}$ (4) $\frac{5\sqrt{6}+3\sqrt{2}}{22}$

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ANSWER SHEET

Question	1	2	3	4	5
Answer	3	4	1	3	1
Question	6	7	8	9	10
Answer	1	4	4	1	1
Question	11	12	13	14	15
Answer	2	3	1	3	2
Question	16	17	18	19	20
Answer	1	2	4	4	2