

Q1. Find : (i) $(64)^{\frac{1}{2}}$ (ii) $(32)^{\frac{1}{5}}$ (iii) $(125)^{\frac{1}{3}}$ (iv) $(81)^{\frac{1}{2}}$ (v) $(1331)^{\frac{1}{3}}$
 Ans. 1 (i) 8 (ii) 2 (iii) 5 (iv) 9 (v) 11



Q2. Find : (i) $(9)^{\frac{3}{2}}$ (ii) $(32)^{\frac{2}{5}}$ (iii) $(16)^{\frac{3}{4}}$ (iv) $(125)^{-\frac{1}{3}}$
 Ans. 2 (i) 27 (ii) 4 (iii) 8 (iv) $\frac{1}{5}$

Q3. Simplify : (i) $17^2 \times 17^5$ (ii) $(2)^{\frac{2}{3}} \times (2)^{\frac{1}{5}}$ (iii) $(2)^{\frac{2}{3}} \times (2)^{\frac{1}{3}}$
 (iv) $(5^2)^7$ (v) $\left(\frac{1}{3^3}\right)^7$ (vi) $\left(\frac{1}{3^5}\right)^4$ (vii) $\frac{(23)^{10}}{(23)^7}$ (viii) $\frac{(11)^{\frac{1}{2}}}{(11)^{\frac{1}{4}}}$ (ix) $\frac{(7)^{\frac{1}{5}}}{(7)^{\frac{1}{3}}}$
 (x) $7^3 \times 9^3$ (xi) $(7)^{\frac{1}{2}} \times (8)^{\frac{1}{2}}$ (xii) $(13)^{\frac{1}{5}} \times (17)^{\frac{1}{5}}$ (xiii) $(5)^{\frac{3}{2}} \times (7)^{\frac{3}{2}}$
 Ans. 3 (i) $(17)^7$ (ii) $(2)^{\frac{13}{15}}$ (iii) 2 (iv) $(5)^{14}$ (v) $\frac{1}{(3)^{21}}$ (vi) $\frac{1}{(3)^{20}}$
 (vii) $(23)^3$ (viii) $(11)^{\frac{1}{4}}$ (ix) $(7)^{-\frac{2}{15}}$ (x) $(63)^3$ (xi) $(56)^{\frac{1}{2}}$
 (xii) $(221)^{\frac{1}{5}}$ (xiii) $(35)^{\frac{3}{2}}$

Q4. Evaluate :

(i) $5^2 \times 5^4$ (ii) $5^8 \div 5^3$ (iii) $(3^2)^3$ (iv) $\left(\frac{11}{12}\right)^3$ (v) $\left(\frac{3}{4}\right)^{-3}$ (vi) $\frac{3^0+4^0}{4^0}$ (vii) $\frac{7^0+5^0}{2^0}$
 Ans. 4 (i) 15625 (ii) 3125 (iii) 729 (iv) $\frac{1331}{1728}$ (v) $\frac{64}{27}$ (vi) 2 (vii) 2

Q5. Evaluate :

(i) $\left(\frac{2}{11}\right)^4 \times \left(\frac{11}{3}\right)^2 \times \left(\frac{3}{2}\right)^3$ (ii) $\left(\frac{1}{2}\right)^5 \times \left(-\frac{2}{3}\right)^4 \times \left(\frac{3}{5}\right)^2$ (iii) $\left(\frac{2}{3}\right)^2 \times \left(\frac{2}{5}\right)^{-3} \times \left(\frac{3}{5}\right)^2$
 (iv) $(27)^{-\frac{2}{3}}$ (v) $\left(\frac{64}{25}\right)^{-\frac{3}{2}}$ (vi) $(625)^{-\frac{1}{4}}$ (vii) $\left(\frac{256}{81}\right)^{\frac{5}{4}}$ (viii) $\left(\frac{243}{32}\right)^{-\frac{4}{5}}$ (ix) $\left(\frac{81}{16}\right)^{-\frac{3}{4}}$
 Ans. 5 (i) $\frac{6}{121}$ (ii) $\frac{1}{450}$ (iii) $\frac{5}{2}$ (iv) $\frac{1}{9}$ (v) $\frac{125}{512}$ (vi) $\frac{1}{5}$ (vii) $\frac{1024}{243}$ (viii) $\frac{16}{81}$ (ix) $\frac{8}{27}$

Q6. Simplify :

(i) $\left\{(16)^{-\frac{1}{5}}\right\}^{\frac{5}{2}}$ (ii) $(0.001)^{\frac{1}{3}}$ (iii) $(256)^{0.16} \times (256)^{0.09}$ (iv) $(81)^{0.16} \times (81)^{0.09}$
 (v) $\left(\frac{81}{16}\right)^{-\frac{3}{4}} \times \left(\frac{25}{9}\right)^{-\frac{3}{2}}$ (vi) $(169)^{\frac{1}{3}} \times (13)^{\frac{1}{3}}$