

Simplify :

1.  $\left(a^{\frac{-3}{4}}\right)^8$

2.  $\left(a^{\frac{-2}{3}}b^{\frac{5}{6}}\right)^{\frac{3}{4}}$

3.  $\left(a^{\frac{-1}{2}}b^{-3}\right)^{-2}$

4.  $\left(a^6b^{\frac{5}{4}}\right)^{\frac{-4}{3}}$

5.  $\left(\sqrt[3]{a^4b^3}\right)^6$

6.  $\left(\sqrt[6]{x^9y^{-8}}\right)^{-3}$

7.  $\sqrt[8]{x^2} \cdot \sqrt[4]{x^{-3}}$

8.  $\sqrt{a^{-3}b^4} \times \sqrt[4]{a^2b^{-8}}$

9.  $\sqrt[4]{x^{-2}}\sqrt{y^5} \times \sqrt{x}\sqrt[4]{y^3}$

10.  $(8x^3 \div 27a^{-3})^{\frac{2}{3}}$

11.  $(64x^3 \div 27a^{-3})^{-\frac{2}{3}}$

12.  $\sqrt[3]{a^6b^{-2}c^{-8}} \times \sqrt[4]{a^{-6}b^4c^{-1}}$

13.  $\sqrt{a^{\frac{-2}{3}}b^4c^{\frac{-1}{3}}} \div \sqrt{a^2b^4c^{-1}}$

14.  $\sqrt{ab^{-2}c^3} \div \left(\sqrt[3]{a^3b^2c^{-3}}\right)^{-1}$

15.  $\left(\frac{a^{-1}b^2}{a^2b^{-4}}\right)^7 \div \left(\frac{a^3b^{-5}}{a^{-2}b^3}\right)^{-5}$

## ANSWER KEY

## DPP-2

- |                                       |  |                                |  |
|---------------------------------------|--|--------------------------------|--|
| 1. $a^{-6}$                           | 2. $a^{-\frac{1}{2}}b^{\frac{5}{8}}$                 | 3. $ab^6$                      | 4. $a^{-8}b^{-\frac{5}{3}}$                            |
| 5. $a^8b^6$                           | 6. $x^{-\frac{9}{2}}y^4$                             | 7. $x^{\frac{5}{32}}$          | 8. $a^{-1}$  |
| 9. $y$                                | 10. $\frac{4}{9}x^2a^2$                              | 11. $\frac{9}{16}x^{-2}a^{-2}$ | 12. $a^{\frac{1}{2}}b^{\frac{1}{3}}c^{-\frac{35}{12}}$ |
| 13. $a^{-\frac{4}{3}}c^{\frac{1}{3}}$ | 14. $a^{\frac{3}{2}}b^{-\frac{1}{3}}c^{\frac{1}{2}}$ | 15. $a^4b^2$                   |  |