

Evaluate and simplify the following with only positive exponents. Assume nonnegative variables.

[Do not use a calculator.]

1. $(\sqrt{5})^4$

2. $\sqrt{x^2}$

3. $32^{3/5}$

4. $16^{3/4}$

5. $(-27)^{2/3}$

6. $(16^{1/2})^{1/2}$

7. $\frac{8^{5/6}}{8^{1/2}}$

8. $\frac{32^{1/3}}{4^{1/3}}$

9. $(16x^3)^{1/2}$

10. $(c^3b^6)^{1/3}$

11. $(-64x^6y^9)^{2/3}$

12. $(x^3)^{-2/3}$

13. $(c^{1/3})^{-6}$

14. $(\sqrt[4]{16x^2})^3$

15. $\frac{x^{7/3}x^{5/3}}{y^{-2/3}}$

1. 25

2. x

3. 8

4. 8

5. 9

6. 2

7. 2

8. 2

9. $4x^{3/2}$

10. cb^2

11. $16x^4y^6$

12. $\frac{1}{x^2}$

13. $\frac{1}{c^2}$

14. $8x^{3/2}$

15. $x^4y^{2/3}$