

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