Radical exponents

Simplify and eliminate negative exponents

1. $y^3 y^{-9}$	2. $(z^3 z^4)^{\frac{1}{2}}$	3. $\left(\dfrac{9z}{8z^6}\right)^{-3}$
4. $(x^3 y^{-5})(2x^{-4} y^2)(4xy^5)$	5. $\dfrac{b^8 b^{-2}}{b^{-1}}$	6. $\dfrac{7y^6}{7y^{-4} z^4}$
7. $\dfrac{x^{-3} y^{-2}}{y^{-1}}$	8. $\left(\dfrac{a^3 b^{-2}}{a^{-3} b^2}\right)^3$	9. $\left(\dfrac{w}{3x^{-3}}\right)^{-2}$

10. $(9x)^{1/2} \cdot \left(4x^{1/4}\right)$

11. $x^{2/3} \cdot x^{4/3}$

12. $(-8x^6 y^{-18})^{-1/3}$

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

14. $y^{-1}\left(yx^{1/2}\right)^{2/3}$

15. $\left((2b)^{2/9}\right)^3 \cdot (2b)^{1/3}$

Answers

1. $\dfrac{1}{y^6}$

2. $z^3\sqrt{z}$

3. $\dfrac{512}{729}z^{15}$

4. $8y^2$

5. b^7

6. $\dfrac{y^{10}}{z^4}$

7. $\dfrac{1}{x^3y}$

8. $\dfrac{a^{18}}{b^{12}}$

9. $\dfrac{9}{w^2x^6}$

10. $12\sqrt[4]{x^3}$

11. x^2

12. $\dfrac{-y^6}{2x^2}$

13. $\dfrac{b^{15}}{a^8}$

14. $\sqrt[3]{\dfrac{x}{y}}$

15. $2b$