

Simplify each expression.

1.  $-3j^6 \cdot 12j$

2.  $-8h^3 \cdot 5h^{-4}$

3.  $4x^{-3}y^0$

4.  $\frac{9m^{-2}}{4n^{-1}}$

5.  $\frac{-6a^{-2}bc^2}{-d^{-4}}$

6.  $\frac{10fg^{-5}h^0}{h^{-2}}$

7.  $(-4x^3y)^2$

8.  $(x^{-2}y^4 \cdot x^5y^{-7})^3$

9.  $-11^0$

10.  $\left(\frac{-4x^3}{-8x^6}\right)^3$

11.  $\frac{x^6y^9}{x^2y^5}$

12.  $\left(\frac{3x^4}{2y^3}\right)^3$

Evaluate each expression.

13.  $\sqrt[3]{343}$

14.  $\sqrt[3]{-8}$

15.  $\sqrt[4]{256}$

16.  $\sqrt[5]{-243}$

Because:

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Write each radical as a power.

17.  $\sqrt[3]{13}$

18.  $\sqrt[6]{y^2}$

19.  $\sqrt[7]{m^2}$

20.  $\sqrt{x^5}$

Write each expression in radical form. Simplify your answer, if possible.

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

22.  $y^{\frac{2}{3}}$

23.  $9^{\frac{2}{5}}$

24.  $n^{\frac{5}{2}}$