

$$\frac{6^2}{(6^{-2} \cdot 5^1)^{-2}} =$$

$$\frac{6^2}{6^4 5^{-2}} =$$

$$\frac{6^{-2}}{5^{-2}} = \frac{5^2}{6^2}$$
$$= \frac{25}{36}$$

$$\left(\frac{r}{x^{-5}} \right)^2$$

$$\frac{r^2}{x^{-10}}$$

$$r^2 x^{10}$$

$$\left(\frac{a}{b} \right)^m = \frac{a^m}{b^m}$$

$$a^{-m} = \frac{1}{a^m}$$

$$(7x^{-3})^2 x^5 x$$

$$(7x^{-3})^2 x^6$$

$$7^2 x^{-6} x^6$$

$$49 x^0$$

$$49$$

$$a^m \cdot a^n = a^{m+n}$$

$$(ab)^m = a^m b^m$$

$$a^m \cdot a^n = a^{m+n}$$

$$a^0 = 1$$

$$(-9)^1(-9)^3 = (-9)^4$$

$$\frac{(x^2 y^2)^2}{x^3 y^{-1}} \quad (ab)^m = a^m b^m$$

$$\frac{x^2 y^4}{x^3 y^{-1}}$$

$$\frac{a^m}{a^n} = a^{m-n}$$

$$2-3 = -1$$

$$4+1 = 5$$

$$x^{-1} y^5$$

$$a^{-m} = \frac{1}{a^m}$$

$$\frac{y^5}{x}$$

$$(-1y^2)^5 y^2 y^{-12}$$

$$(-1)^5 y^{10} y^2 y^{-12}$$

$$-1 y^0$$

$$\textcircled{-1}$$

$$(ab)^m = a^m b^m$$

$$a^m a^n = a^{m+n}$$

$$y^0 = 1$$

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Simplify the expression. Tell which properties of exponents you used.

9. $z^{-2} \cdot z^{-4} \cdot z^6$

10. $yz^{-2}(x^2y)^3z$

11. $(4x^3)^{-2}$

12. $\left(\frac{2}{x^{-3}}\right)^6$

13. $\frac{3y^6}{y^3}$

14. $\frac{(xy)^4}{xy^{-1}}$