

Name : _____

Simplifying Expressions: Exponents

MS3

Simplify each expression.

1) $(-3x^{-3}yz)(2x^9y^{-1})$

2) $\frac{12a^{-4}b^{-2}}{24a^{-6}b^{-1}}$

3) $\frac{14p^3q^{-2}r^{-5}}{2p^{-2}q^{-4}r^{-9}}$

4) $(5a^{-3}b^{-6})^2$

5) $\frac{-25m^9n^{-3}}{5m^{-2}n^2}$

Gain complete access to the largest collection of worksheets in all subjects!

$s^5t^{-1}u^{-4})(10st^{15}u^5)$

7) $\frac{(3p^{-2}q^5r^3)^2}{3p^{-6}q^{-1}r^2}$

Members, please log in to download this worksheet.

Not a member? Please sign up to gain complete access.

www.mathworksheets4kids.com

9) $\left(\frac{2a^{-8}b^{-2}}{3a^{-2}b^{-3}}\right)^3$

10) $(-7u^{14}v^{12}w^{15})(-9u^{-9}v^2w^{-2})$

Name : _____

Answer key

MS3

Simplifying Expressions: Exponents

Simplify each expression.

1) $(-3x^{-3}yz)(2x^9y^{-1})$

$-6x^6z$

2) $\frac{12a^{-4}b^{-2}}{24a^{-6}b^{-1}}$

$\frac{a^2}{2b}$

3) $\frac{14p^3q^{-2}r^{-5}}{2p^{-2}q^{-4}r^{-9}}$

$7p^5q^2r^4$

5) $\frac{-25m^9n^{-3}}{5m^{-2}n^2}$

$-\frac{5m^{11}}{n^5}$

7) $\frac{(3p^{-2}q^5r^3)^2}{3p^{-6}q^{-1}r^2}$

$3p^2q^{11}r^4$

9) $\left(\frac{2a^{-8}b^{-2}}{3a^{-2}b^{-3}}\right)^3$

$\frac{8b^3}{27a^{18}}$

10) $(-7u^{14}v^{12}w^{15})(-9u^{-9}v^2w^{-2})$

$63u^5v^{14}w^{13}$

PREVIEW

Gain complete access to the largest collection of worksheets in all subjects!

Members, please log in to download this worksheet.

Not a member? Please sign up to gain complete access.

www.mathworksheets4kids.com