

Name : _____

Simplifying Expressions: Exponents

MS4

Simplify each expression.

1) $\frac{45x^{10}yz^8}{3x^5y^3z^4}$

2) $(5v^4w^5)(2u^5w^4)(3u^4v^5)$

3) $(6b^6c^4d^7)(4b^5c^4d^8)$

4) $\frac{12p^{15}q^9r^{13}}{4}$

5) $\frac{3n^8m^5}{15n^8m^{11}}$

7) $(7p^9q^8)(p^2q)$

9) $\frac{10(u^2v^5)^2}{10u^4v^8}$

10) $(5x^9y^7z^5)(-x^8y^7z^3)(5x^4y^5z^4)$

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Name : _____

Answer key

Simplifying Expressions: Exponents

MS4

Simplify each expression.

1) $\frac{45x^{10}yz^8}{3x^5y^3z^4}$

$\frac{15x^5z^4}{y^2}$

2) $(5v^4w^5)(2u^5w^4)(3u^4v^5)$

$30u^9v^9w^9$

3) $(6b^6c^4d^7)(4b^5c^4d^8)$

$24b^{11}c^8d^{15}$

4) $\frac{12p^{15}q^9r^{13}}$

5) $\frac{3n^8m^5}{15n^8m^{11}}$

$\frac{1}{5m^6}$

7) $(7p^9q^8)(p^2q^3)$

$42p^{18}q^{25}$

9) $\frac{10(u^2v^5)^2}{10u^4v^8}$

v^2

10) $(5x^9y^7z^5)(-x^8y^7z^3)(5x^4y^5z^4)$

$-25x^{21}y^{19}z^{12}$

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