

Name : _____

Simplifying Expressions: Exponents

MS4

Simplify each expression.

1) $(-4b^5c^2)(3a^9b^5)(2a^{-3}b^2)$

2) $\frac{14u^{-5}v^{-2}}{6u^{-9}v^3}$

3) $\frac{2m^{-8}n^{-2}}{3m^{-2}n^{-3}}$

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

5) $\frac{54s^7t^{-9}u^{-5}}{36s^{-3}t^2u^9}$

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7) $(x^8y^{-5}z^7)(-1)$

9) $\frac{-13u^9v^7w^{-6}}{39u^9v^{-2}w^2}$

10) $\frac{12c^9d^5}{3c^{-2}d^{-3}}$

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Answer key

Simplifying Expressions: Exponents

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Simplify each expression.

1) $(-4b^5c^2)(3a^9b^5)(2a^{-3}b^2)$

$$-24a^6b^{12}c^2$$

2) $\frac{14u^{-5}v^{-2}}{6u^{-9}v^3}$

$$\frac{7u^4}{3v^5}$$

3) $\frac{2m^{-8}n^{-2}}{3m^{-2}n^{-3}}$

$$\frac{2n}{3m^6}$$

5) $\frac{54s^7t^{-9}u^{-5}}{36s^{-3}t^2u^9}$

$$\frac{3s^{10}}{2t^{11}u^{14}}$$

7) $(x^8y^{-5}z^7)(-10x^{14}y^4z^4)$

$$-10x^{22}y^{-1}z^{11}$$

9) $\frac{-13u^9v^7w^{-6}}{39u^9v^{-2}w^2}$

$$-\frac{v^9}{3w^8}$$

10) $\frac{12c^9d^5}{3c^{-2}d^{-3}}$

$$4c^{11}d^8$$

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