

Name: _____

No work No credit

Date: _____

CW 3-3: Algebra 1 - Sections 8-1 to 8-3

50 points

1. Complete each rule:

a. $x^a \cdot x^b =$

If you _____ the same base,
then you keep the base and _____ the exponents.

b. $(x^a)^b =$

If a base is raised to an _____ which, in turn,
is raised to an _____ then you
keep the base and _____ the exponents.

c. $\frac{x^a}{x^b} =$

If you _____ the same base,
then you keep the base and _____ the exponents

d. $x^0 =$

Any base to the zero power equals _____

e. $x^{-a} =$

If a base has a _____ exponent in the numerator
then it will have a _____ exponent in the denominator.

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CW 3-3: Algebra 1 - Sections 8-1 to 8-3 - Review For Quiz 3-2

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2. Simplify. Answers must have positive exponents only.

a. $(-2a^5b^3)(7a^{-2}b^4c^9)$

b. $(3m^5n^7)^4$

c. $\frac{8k^9g^4}{14k^4g^{11}}$

d. $\frac{(4c^2d^5)^3}{8c^{14}d^{11}}$

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CW 3-3: Algebra 1: Sections 8-1 to 8-3

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3. Simplify. Answers must have positive exponents only:

a.
$$\frac{24g^5h^{-3}k^0}{10g^{-4}h^5k^{-2}}$$

b.
$$\left(\frac{3x^{-4}y^6}{4x^4y^3}\right)^2$$

c.
$$(-2a^5b^3)^3 (7a^{-2}b^4c^9)^2$$

d.
$$(2a^5b^{-3})^4 (3a^{-7}b^5c^{-3})$$