

Name:

Date: Score:

Exponent Rules Review

Multiplication

1 Simplify each exponent

a $6^1 \cdot 6^4$

b $j^4 \cdot j^4$

c $a^4 \cdot b^3 \cdot b^5$

2 Find the product

a $(5a^3) \cdot (-b^8a^2)$

b $(10g^3h^8v^6)(11gh^8)$

Power to a power

3 $(-3^2x^6)^5$

4 $2(4a^2)^2$

5 $\left(\frac{4a^2}{2a^2}\right)^2$

Division

6 $\frac{a^{10}}{a^4}$

7 $\frac{8 \cdot g^8 \cdot h^4}{g^3 \cdot h^5}$

8 $\frac{c^9}{6c^3}$

Negative Exponents

9 $(2^0 \cdot x^{-2})^4$

10 $8a^4b^{-10}$

11 $\frac{a^{12}b^{-2}}{a^4b^5}$

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Exponent Rules Review

Multiplication

Answers

1

a $6^1 \cdot 6^4$

7776

b $j^4 \cdot j^4$

j^8

c $a^4 \cdot b^3 \cdot b^5$

a^4b^8

2

a $(5a^3) \cdot (-b^8a^2)$

$-5a^5b^8$

b $(10g^3h^8v^6)(11gh^8)$

$\frac{10g^2v^6}{11}$

Power to a power

3 $(-3^2x^6)^5$

$-59049x^{30}$

4 $2(4a^2)^2$

$32a^4$

5 $\left(\frac{4a^2}{2a^2}\right)^2$

4

Division

6 $\frac{a^{10}}{a^4}$

a^6

7 $\frac{8 \cdot g^8 \cdot h^4}{g^3 \cdot h^5}$

$8g^5h^{-1}$

8 $\frac{c^9}{6c^3}$

$\frac{c^6}{6}$

Negative Exponents

9 $(2^0 \cdot x^{-2})^4$

$\frac{1}{x^8}$

10 $8a^4b^{-10}$

$\frac{8a^4}{b^{10}}$

11 $\frac{a^{12}b^{-2}}{a^4b^5}$

a^8b^{-7}