

Name:

Date: Score:

Exponents - Product & Quotient Rule

Simplify using the product rule

1 $(-6)^5 \cdot (-6)^{12}$

2 $6^2 \cdot 6^{2+x}$

3 $2x^3 \cdot 2x^2$

4 $(x^2y)^4$

5 $3^4 \cdot 3^{-2}$

6 $2^3 \cdot 2^9 \cdot 2^7$

Simplify using the quotient rule

7 $\frac{52x^6}{13x^{-7}}$

8 $\left(\frac{4a^5b}{16ab^4}\right)^3$

9 $\frac{5p^8}{20p^8}$

10 $\frac{18a^8b^8}{10a^3}$

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Exponents - Product & Quotient Rule

Answers

1 $(-6)^5 \cdot (-6)^{12}$

$(-6)^{17}$

3 $2x^3 \cdot 2x^2$

$4x^5$

5 $3^4 \cdot 3^{-2}$

3^{-8}

7 $\frac{52x^6}{13x^{-7}}$

$4x^{13}$

9 $\frac{5p^8}{20p^8}$

$\frac{1}{4}$

2 $6^2 \cdot 6^{2+x}$

6^{4+2x}

4 $(x^2y)^4$

x^8y^4

6 $2^3 \cdot 2^9 \cdot 2^7$

2^{189}

8 $\left(\frac{4a^5b}{16ab^4}\right)^3$

$\frac{a^{12}}{64b^9}$

10 $\frac{18a^8b^8}{10a^3}$

$\frac{9a^5b^8}{5}$