

Exponents - Quotient Rule

A) Use the quotient rule to rewrite each expression as a single exponent.

1) $\frac{(-2.4)^9}{(-2.4)^{-4}}$

2) $\frac{v^{-10}}{v^{-15}}$

3) $\left(\frac{4}{c}\right)^{17} \div \left(\frac{4}{c}\right)^5$

4) $\frac{y}{y^7}$

5) $\left(-\frac{s}{t}\right)^6 \div \left(-\frac{s}{t}\right)^4$

6) $\frac{(-p)^{-12}}{(-p)^{-3}}$

B) Find the value of x .

1) $(-x)^{-14} \div \left(-\frac{n}{2}\right)^2 = \left(-\frac{n}{2}\right)$

$x =$ _____

4) $\frac{(-r)^0}{(-r)^{-x}} = (-r)^{-11}$

$x =$ _____

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$\frac{(-t)^x}{(-t)^4} = (-t)^{-9}$

$x =$ _____

$\frac{(3.3)^{-x}}{3.3} = (3.3)^{-19}$

$x =$ _____

C) 1) Find the value of x , if $\left(\frac{b}{a}\right)^x \div \left(\frac{b}{a}\right)^{-2} = \left(\frac{b}{a}\right)^{17}$.

i) -15

ii) 15

iii) 19

iv) -19

2) Which of the following equals $\frac{(-u)^{-11}}{(-u)^{-9}}$?

i) $(-u)^{-2}$

ii) $(-u)^{-20}$

iii) $(-u)^2$

iv) $(-u)^{20}$

Name : _____

Exponents - Quotient Rule

A) Use the quotient rule to rewrite each expression as a single exponent.

1) $\frac{(-2.4)^9}{(-2.4)^{-4}}$

$(-2.4)^{13}$

2) $\frac{v^{-10}}{v^{-15}}$

v^5

3) $\left(\frac{4}{c}\right)^{17} \div \left(\frac{4}{c}\right)^5$

$\left(\frac{4}{c}\right)^{12}$

4) $\frac{y}{y^7}$

y^{-6}

5) $\left(-\frac{s}{t}\right)^{-6} \div \left(-\frac{s}{t}\right)^4$

$(-p)^{-9}$

6) $\frac{(-p)^{-12}}{(-p)^{-3}}$

B) Find the value of x .

1) $(-x)^{-14} \div \left(-\frac{n}{2}\right)^2 = \left(-\frac{n}{2}\right)$

$x =$ $\frac{n}{2}$

4) $\frac{(-r)^0}{(-r)^{-x}} = (-r)^{-11}$

$x =$ -11

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$\frac{(-t)^x}{(-t)^4} = (-t)^{-9}$

$x =$ -5

$\frac{(3.3)^{-x}}{3.3} = (3.3)^{-19}$

$x =$ 18

C) 1) Find the value of x , if $\left(\frac{b}{a}\right)^x \div \left(\frac{b}{a}\right)^{-2} = \left(\frac{b}{a}\right)^{17}$.

i) -15

ii) 15

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2) Which of the following equals $\frac{(-u)^{-11}}{(-u)^{-9}}$?

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