

Exponents - Quotient Rule

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

1) $\frac{(-5)^{17}}{(-5)^7}$

2) $\frac{(1.4)^4}{(1.4)^{-2}}$

3) $\frac{2^{-3}}{2^{-5}}$

4) $\left(\frac{2}{3}\right)^0 \div \left(\frac{2}{3}\right)^{-18}$

5) $\frac{(-17)^2}{(-17)^8}$

6) $\frac{(-3.8)^{-5}}{(-3.8)^4}$

B) Find the value of x .

1) $\frac{(2.5)^{11}}{(2.5)^{-x}} = (2.5)^{15}$

$x =$ _____

4) $\frac{x^{-1}}{(-19)^{-2}} = -19$

$x =$ _____

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$\frac{(-14)^x}{(-14)^{-8}} = (-14)^3$

$x =$ _____

$\left(-\frac{4}{5}\right)^{18} \div \left(-\frac{4}{5}\right)^{-x} = \left(-\frac{4}{5}\right)^{14}$

$x =$ _____

C) 1) Which of the following equals $\frac{(-12)^{10}}{(-12)^2}$?

i) $(-12)^{12}$

ii) $(-12)^8$

iii) $(-12)^{-8}$

iv) $(-12)^{-12}$

2) Find the value of x , if $\frac{(6.1)^{16}}{(6.1)^{-x}} = (6.1)^{19}$.

i) 3

ii) -3

iii) -35

iv) 35

Name : _____

Exponents - Quotient Rule

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

1) $\frac{(-5)^{17}}{(-5)^7}$

2) $\frac{(1.4)^4}{(1.4)^{-2}}$

3) $\frac{2^{-3}}{2^{-5}}$

 $(-5)^{10}$

 $(1.4)^6$

 2^2

4) $\left(\frac{2}{3}\right)^0 \div \left(\frac{2}{3}\right)^{-18}$

5) $\frac{(-17)^2}{(-17)^8}$

6) $\frac{(-3.8)^{-5}}{(-3.8)^4}$

 $\left(\frac{2}{3}\right)^{18}$

 $(-3.8)^{-9}$

B) Find the value of x .

1) $\frac{(2.5)^{11}}{(2.5)^{-x}} = (2.5)^{15}$

$\frac{(-14)^x}{(-14)^{-8}} = (-14)^3$

$x =$ **4**

$x =$ **-5**

4) $\frac{x^{-1}}{(-19)^{-2}} = -19$

$\left(-\frac{4}{5}\right)^{18} \div \left(-\frac{4}{5}\right)^{-x} = \left(-\frac{4}{5}\right)^{14}$

$x =$ **-19**

$x =$ **-4**

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i) 3

ii) -3

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iv) 35