

## 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