

Exponents - Quotient Rule

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

1) $\frac{(-b)^{12}}{(-b)^7}$

2) $\frac{(-17)^{-11}}{(-17)^{-3}}$

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

4) $\left(\frac{m}{3}\right)^{-16} \div \left(\frac{m}{3}\right)^{-10}$

5) $\frac{(-t)^{-8}}{(-t)^4}$

6) $\frac{(-9.2)^{12}}{(-9.2)^{-6}}$

B) Find the value of x .

1) $\frac{d^8}{d^{-x}} = d^{17}$

$x =$ _____

4) $\frac{x^4}{(-2.5)^{11}} = (-2.5)^{-7}$

$x =$ _____

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$\frac{(-12)^{-4}}{(-12)^x} = (-12)^{-10}$

$x =$ _____

$\frac{(-s)^3}{(-s)^{-x}} = (-s)^2$

$x =$ _____

C) 1) Find the value of x , if $\frac{(5.2)^{-16}}{(5.2)^{-x}} = (5.2)^{-13}$.

i) -29

ii) 29

iii) -3

iv) 3

2) Which of the following equals $\frac{c^0}{c^4}$?

i) c^{-12}

ii) c^{-4}

iii) c^4

iv) c^0