Name : _____

Exponents - Power of a Power Rule

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

1) $((6.1)^{-7})^3$

2) $\left(\left(\frac{7}{8}\right)^{10}\right)^{-4}$

3) $((-3)^{-6})^{-1}$

_____   _____   _____

4) $(18^2)^{-6}$

5) $(2^{-11})^{-3}$

6) $((-7)^{-15})^5$

_____

B) Find the value of x.

1) $\left(\left(-\frac{1}{5}\right)^9\right)^x = \left(-\frac{1}{5}\right)^{27}$

PREVIEW

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$x^5)^{-3} = (-5)^{-15}$

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$x =$ _____

$x =$ _____

4) $(11^3)^{-x} = 11^{21}$

$(-6)^2)^{-x} = (-6)^{-18}$

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$x =$ _____

$x =$ _____

C) 1) Find the value of x, if $((-9.4)^2)^{-x} = (-9.4)^{24}$.

i) -26 ii) 22 iii) -12 iv) 12

2) Which of the following equals $(19^0)^{-5}$?

i) 1 ii) 19^{-5} iii) 19^5 iv) 19