Name : _____

Exponents – Power of a Power Rule

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

1) $((-m)^{-16})^{-2}$

2) $((8.9)^4)^{-13}$

3) $(q^{-8})^{12}$

_____

_____

_____

4) $((-19)^6)^8$

5) $\left(\left(\dfrac{d}{6}\right)^{-3}\right)^{18}$

6) $((-y)^{17})^{-5}$

_____

B) Find the value of x.

1) $((-1.2)^{-x})^{20} = (-1.2)^{80}$

PREVIEW

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$(-20)^x)^7 = 1$

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$x =$ _____

$x =$ _____

4) $(a^{-x})^2 = a^{14}$

$(-s)^{-19})^x = (-s)^{-95}$

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$x =$ _____

$x =$ _____

C) 1) Which of the following equals $((-6.4)^5)^{-6}$?

i) $(-6.4)^{-1}$ ii) $(-6.4)^{-30}$ iii) $(-6.4)^{-11}$ iv) -6.4

2) Find the value of x, if $\left(\left(\dfrac{c}{5}\right)^x\right)^{13} = \left(\dfrac{c}{5}\right)^{-91}$.

i) 7   ii) −8   iii) 8   iv) −7