Name : _____

Exponents

A) Use the laws of exponents to find the value of x.

1) $(-3)^2 \cdot (-3)^x = (-3)^6$

2) $((0.5)^2)^x = (0.5)^{-20}$

$x =$ _____

$x =$ _____

3) $\dfrac{11^0}{11^{-x}} = 11^{-11}$

4) $x^5 \cdot \left(-\dfrac{3}{2}\right)^5 = 18^5$

$x =$ _____

5) $\left(-\dfrac{1}{2}\right)^x \cdot \left(-\dfrac{1}{2}\right)^{-15} = \left(-\dfrac{1}{2}\right)$

$x =$ _____

7) $\dfrac{x^{-3}}{10^{-3}} = (3.8)^{-3}$

$x =$ _____

B) Use the laws of expone

1) $\dfrac{3^{10} \cdot 7^{-4} \cdot 11^{13}}{21^{-4} \cdot 11^6} = x^{14} \cdot 11^y$

2) $\dfrac{(-20)^{-7} \cdot (-2)^{15}}{4^9 \cdot (-2)^{15} \cdot (-5)^{-3}} = 4^x \cdot (-5)^y$