

Exponents

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

$$1) \frac{(6.7)^{-17}}{(6.7)^{-x}} = (6.7)^{14}$$

$$x = \underline{\hspace{2cm}}$$

$$2) \frac{(-15)^{-18}}{x^{-7}} = (-15)^{-11}$$

$$x = \underline{\hspace{2cm}}$$

$$3) x^{-3} \cdot 4^{-3} = 20^{-3}$$

$$x = \underline{\hspace{2cm}}$$

$$4) ((-12)^{-4})^x = (-12)^{16}$$

$$5) 625^{-8} = 25^{-x}$$

$$x = \underline{\hspace{2cm}}$$

$$7) \frac{(-79)^{-6}}{x^{-6}} = (-10)^{-6}$$

$$x = \underline{\hspace{2cm}}$$

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B) Use the laws of exponents to find the value of x and y .

$$1) \frac{(-2)^{-9} \cdot (-10)^0 \cdot 5^{-3}}{(-10)^{-4} \cdot (-2)^{-6}} = (-2)^{-x} \cdot 5^y$$

$$2) \left(\frac{11}{10}\right)^{-8} \div \frac{100^7}{11^{-5}} = 11^{-x} \cdot 10^{-y}$$