

Student Name: _____

Score: _____

Product Rule Worksheet

Rewrite the following as single exponent using product rule:

Work Space

$$x^{11}x^8 = \underline{\hspace{2cm}}$$

$$(-z)^5(-z)^4 = \underline{\hspace{2cm}}$$

$$y^{-4}y^{-2} = \underline{\hspace{2cm}}$$

$$\left(\frac{1}{a}\right)^5 \left(\frac{1}{a}\right)^9 = \underline{\hspace{2cm}}$$

$$(-z)^{-5}(-z)^{-11} = \underline{\hspace{2cm}}$$

$$s^{-4}s^{-5}s^{-6} = \underline{\hspace{2cm}}$$

$$\left(-\frac{1}{d}\right)^{11} \left(-\frac{1}{d}\right)^{13} = \underline{\hspace{2cm}}$$

$$(-x)^6(-x)^5(-x)^4 = \underline{\hspace{2cm}}$$

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Answers

$$x^{11}x^8 = x^{19}$$

$$(-z)^5(-z)^4 = (-z)^9$$

$$y^{-4}y^{-2} = y^{-6}$$

$$\left(\frac{1}{a}\right)^5 \left(\frac{1}{a}\right)^9 = \left(\frac{1}{a}\right)^{14}$$

$$(-z)^{-5}(-z)^{-11} = \frac{1}{z^{16}}$$

$$s^{-4}s^{-5}s^{-6} = \frac{1}{s^{15}}$$

$$\left(-\frac{1}{d}\right)^{11} \left(-\frac{1}{d}\right)^{13} = \left(\frac{1}{d}\right)^{24}$$

$$(-x)^6(-x)^5(-x)^4 = (-x)^{15}$$