

Name \_\_\_\_\_

# Exponents (Power of a product)

By Using the law Power of a product,  
write each expression in a single exponent.  $(x^m \cdot y^m) = xy^m$

1) $4x^5 \cdot 3y^5$  <u><math>(12xy)^5</math></u>	2) $(-5)^3 \cdot 2x^3$  <u><math>(-10x)^3</math></u>	3) $(2xy)^{-2} \cdot (3z)^{-2}$  <u><math>(6xyz)^{-2}</math></u>
4) $(-4a)^{-4} \cdot (3b)^{-4}$  <u><math>(-12ab)^{-4}</math></u>	5) $3z^2 \cdot (-4y)^2$  <u><math>(-12yz)^2</math></u>	6) $(-5xy)^{-6} \cdot (-4)^{-6}$  <u><math>(20xy)^{-6}</math></u>
7) $\left(\frac{a}{12}\right)^3 \cdot \left(\frac{3}{4b}\right)^3$  <u><math>\left(\frac{a}{16b}\right)^3</math></u>	8) $\left(\frac{xy}{5}\right)^2 \cdot \left(\frac{1}{x}\right)^2$  <u><math>\left(\frac{y}{5}\right)^2</math></u>	9) $\left(\frac{2c}{5c}\right)^{-5} \cdot \left(\frac{-y}{8}\right)^{-5}$  <u><math>\left(\frac{-y}{20}\right)^{-5}</math></u>
10) $\left(\frac{-3a}{15}\right)^{-4} \cdot \left(\frac{-1}{2b}\right)^{-4}$  <u><math>\left(\frac{a}{10b}\right)^{-4}</math></u>	11) $\left(\frac{-8d}{24}\right)^{-2} \cdot \left(\frac{-5c}{10d}\right)^{-2}$  <u><math>\left(\frac{c}{6}\right)^{-2}</math></u>	12) $\left(\frac{-3a}{5}\right)^6 \cdot \left(\frac{10}{ab}\right)^6$  <u><math>\left(\frac{-6a}{b}\right)^6</math></u>