## Rule #5: Power to a power rule

$$(a^m)^n = a^{m \times n}$$

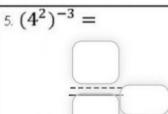
- 1.  $(2^3)^4 =$
- $2(3^{-2})^{-1} =$
- 3.  $(x^4)^5 =$



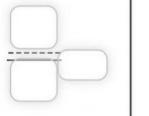


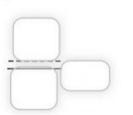






6. 
$$(y^6)^{-1} =$$





## Rule # 6: Product to a power rule $(ab)^n = a^n b^n$

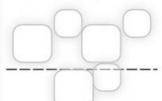
$$7.(xy^2)^3 =$$

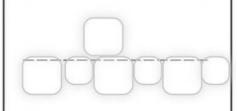


8.  $(p^2qr^{-1})^2 =$ 

9. 
$$(a^4bc)^{-2} =$$



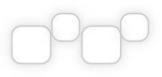


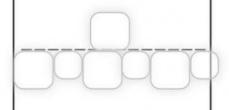


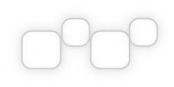
10. 
$$(m^2n^4)^3 =$$

11. 
$$(d^3f^5g)^{-2} =$$

12. 
$$(b^{-2}c^{-3})^{-1} =$$







## Rule #7:Quotient to a power rule

$$\left(\frac{a}{b}\right)^n = \frac{a^n}{b^n}$$

13.  $\left(\frac{x}{y}\right)^2$ 



$$14. \left(\frac{p^2 q^3}{r^2}\right)^3$$



15. 
$$\left(\frac{x}{x^2}\right)^3$$

