## Higher Exponents

## Powers

$(a b)^{n}=a^{n} b^{n}$

$$
\left(\frac{1}{b}\right)^{n}=\left(\frac{1}{b^{n}}\right)
$$

$$
(a \div b)^{n}=a^{n} \div b^{n}
$$

$$
\begin{aligned}
& a^{m} \cdot a^{n}=a^{m+n} \\
& a^{m} \div a^{n}=a^{m-n} \\
& \left(a^{m}\right)^{n}=a^{m n}
\end{aligned}
$$



Below are some interactive notebook pieces for the rules of higher exponents. Cut out the table and the answers. Cut the table along the dotted lines and fold the flaps inwards. Glue the answers in the correct area on the very inside.

| $(a b)^{n}=$ |  | Power of product |
| :---: | :---: | :---: |
| $\left(\frac{1}{b}\right)^{n}$ |  | Power of reciprocal |
| $(a \div b)^{n}=$ | Power of quotient |  |
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$\left(\frac{1}{b^{n}}\right) \quad a^{n} \div b^{n} \quad a^{n} b^{n}$

| $a^{m} \cdot a^{n}=$ | Product of powers <br> (same base) |
| :---: | :---: | :---: |
| $a^{m} \div a^{n=}$ | Quotient of powers <br> (same base) |
| $\left(a^{m}\right)^{n}=$ | Power of powers |
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| $a^{m n}$ | $a^{m+n}$ | $a^{m-n}$ |
| :---: | :---: | :---: |

