

Negative Powers

If a number is raised to a **negative power**, we find its **reciprocal**.

Reciprocal means **multiplicative inverse**.

 **Example**

The reciprocal of 4 is $\frac{1}{4}$ because $4 \times \frac{1}{4} = 1$

$$\text{So } 4^{-1} = \frac{1}{4}$$

Another way to think about reciprocals is that multiplying by $\frac{1}{4}$ is the same as dividing by 4

 **Example**

$$3^{-2} = \frac{1}{3^2} = \frac{1}{9}$$

This means “the reciprocal of 3^2 ”