

# Dividing by Zero

\* Dividing a number by zero is undefined \*

$$\text{ex) } \textcircled{1} \frac{12}{0} = \text{undefined}$$

$$\textcircled{2} 12 \div 0 = \text{undefined}$$

$$\textcircled{3} 0 \overline{)12} = \text{undefined}$$

Think: There are 12 cookies and zero people.  
Can you divide the cookies among zero people?  
No

# Dividing Zero by a Number

\* Dividing zero by a number is always zero \*

$$\text{ex) } \textcircled{1} \frac{0}{12} = 0$$

$$\textcircled{2} 0 \div 12 = 0$$

$$\textcircled{3} 12 \overline{)0} = 0$$

Think: There are 0 cookies and 12 people.  
How many cookies can everyone get? zero