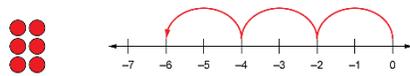


Activity 9 Assessment

Multiplying Integers

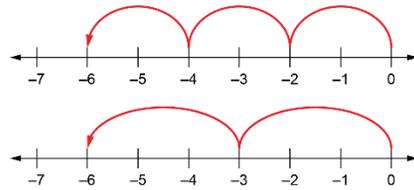
Multiplying Integers

Uses repeated addition to model integer multiplication concretely and pictorially



$-2 + (-2) + (-2) = -6$
 $3 \times (-2)$ is 3 groups of -2 .
 $3 \times (-2) = -6$

Uses number properties to multiply integers with opposite signs



"3 groups of -2 and 2 groups of -3 are the same, so $2 \times (-3) = 3 \times (-2)$."

Uses a pattern to multiply two negative integers

$$\begin{aligned}
 3 \times (-3) &= -9 \\
 2 \times (-3) &= -6 \\
 1 \times (-3) &= -3 \\
 0 \times (-3) &= 0 \\
 -1 \times (-3) &= 3 \\
 -2 \times (-3) &= 6
 \end{aligned}$$

"The pattern is 'Add 3 each time.'
 The product of two negative integers is positive."

Generalizes the sign rules for integer multiplication

$$\begin{aligned}
 3 \times 9 &= 27 \\
 3 \times (-9) &= -27 \\
 -3 \times 9 &= -27 \\
 -3 \times (-9) &= 27
 \end{aligned}$$

"The product of two integers is positive when the integers have the same sign, and negative when they do not."

Observations/Documentation