

Multiplying and Dividing Integers

- Multiplication can be written as repeated addition.

$$2 \cdot -3 \quad \left. \vphantom{2 \cdot -3} \right\} \text{two groups of } -3$$

$$\begin{array}{|c|} \hline - \quad - \\ \hline - \\ \hline \end{array} + \begin{array}{|c|} \hline - \quad - \\ \hline - \\ \hline \end{array} = -6$$

$$4 \cdot -2 \quad \left. \vphantom{4 \cdot -2} \right\} \text{four groups of } -2$$

$$\begin{array}{|c|} \hline - \quad - \\ \hline \end{array} + \begin{array}{|c|} \hline - \quad - \\ \hline \end{array} + \begin{array}{|c|} \hline - \quad - \\ \hline \end{array} + \begin{array}{|c|} \hline - \quad - \\ \hline \end{array} = -8$$

$$-2 \cdot -3 \quad \left. \vphantom{-2 \cdot -3} \right\} \text{the opposite of two groups of } -3$$

$$\begin{array}{|c|} \hline + \quad + \\ \hline + \\ \hline \end{array} + \begin{array}{|c|} \hline + \quad + \\ \hline + \\ \hline \end{array} = 6$$

$$-4 \cdot -2 \quad \left. \vphantom{-4 \cdot -2} \right\} \text{the opposite of four groups of } -2$$

$$\begin{array}{|c|} \hline + \quad + \\ \hline \end{array} + \begin{array}{|c|} \hline + \quad + \\ \hline \end{array} + \begin{array}{|c|} \hline + \quad + \\ \hline \end{array} + \begin{array}{|c|} \hline + \quad + \\ \hline \end{array} = 8$$

+	-	-
-	+	-
-	-	+

$$(-3 \cdot 2) \cdot -4$$

$$-6 \cdot -4$$

24

Even # of negatives:
Answer will be positive

$$(-3 \cdot -2) \cdot -4$$

$$6 \cdot -4$$

-24

Odd # of negatives:
Answer will be negative