

1-6 Multiplying and Dividing Integers

$$(-120) + (-120) + (-120) = 3(-120)$$

$$-120(3) = -360 = -360$$

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$$+6(-8) = -48 \quad 6(8) = 48 \quad -6(-8) = +48 \quad -6(8) = -48$$

Multiplying Integers  
 Same sign = positive  
 Different signs = negative

same signs:  $\begin{matrix} + & \cdot & + & = & + \\ - & \cdot & - & = & + \end{matrix}$  positive

different signs:  $\begin{matrix} + & \cdot & - & = & - \\ - & \cdot & + & = & - \end{matrix}$  negative

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$$-2(3)(-9) = -6(-9) = 54$$

$$-5^2 = -5 \cdot -5 = 25$$

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$$\begin{array}{r} -2 \\ \times 8 \\ \hline -16 \end{array} \quad \begin{array}{r} 8 \\ \times -2 \\ \hline -16 \end{array} \quad -2 \overline{) -16} \quad +8 \overline{) -16}$$

Dividing Integers

same signs:  $\begin{matrix} + & \div & + & = & + \\ - & \div & - & = & + \end{matrix}$  positive

different signs:  $\begin{matrix} + & \div & - & = & - \\ - & \div & + & = & - \end{matrix}$  negative

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$$-28 \div -7 = 4$$

$$\begin{array}{r} 4 \\ -7 \overline{) -28} \\ \hline \end{array} \quad \frac{-28}{-7} = 4$$

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$$-2a = -2(-3) = 6$$

$$b = -5$$

$$6 - (-5) = 6 + 5 = 11$$

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Multiplying and Dividing  
Same signs = positive  
different signs = negative

24.)  $(-7)^2 = -7 \cdot -7 = 49$

*example*  
 $-2^3 = -2 \cdot -2 \cdot -2$   
           $\quad \quad \quad \swarrow \quad \searrow$   
           $\quad \quad \quad 4 \cdot (-2)$   
           $\quad \quad \quad -8$

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