

Distributive Property (4-2)

<i>distributive property</i>	Decode <i>dis · tri · bu · tive prop · er · ty</i>
Definition <i>"3 groups of $x+2$"</i>	Example <i>$3 \cdot (x+2)$</i>

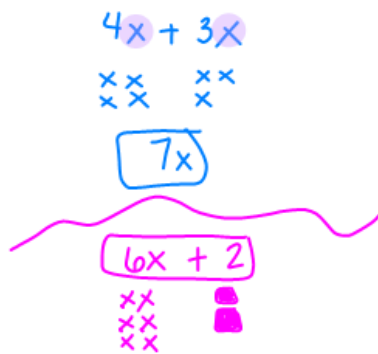
Example 2: Use the distributive property.

I Do	We Do	You Do
$\begin{array}{r} 78 \\ \times 5 \\ \hline \end{array}$ $5(78) = 5(70 + 8)$ $5 \cdot (70 + 8)$ $5 \cdot 70 + 5 \cdot 8$ $350 + 40$ $\boxed{390}$	$3(12 + 10)$ $3 \cdot 12 + 3 \cdot 10$ $36 + 30$ $\boxed{66}$	$7(20 - 4)$ $7 \cdot 20 - 7 \cdot 4$ $140 - 28$ $\boxed{112}$

Example 3: Evaluate using mental math.

I Do	We Do	You Do
$\begin{array}{r} 11 \\ \times 27 \\ \hline 11(20+7) \\ 11 \cdot 20 + 11 \cdot 7 \\ 220 + 77 \\ \hline 297 \end{array}$	<p>You pay \$3.50 for lunch each day. How much will it cost you to eat lunch for 5 days?</p> $\begin{array}{r} 5 \cdot 3.50 \\ 5(3+0.50) \\ 5 \cdot 3 + 5 \cdot 0.50 \\ 15 + 2.50 \\ \hline \$17.50 \end{array}$	$\begin{array}{r} 6(8+0.3) \\ 6 \cdot 8 + 6 \cdot 0.3 \\ 48 + 1.8 \\ \hline 49.8 \end{array}$

Example: Simplify using the distributive property.



I Do	We Do	You Do
$\begin{array}{r} 6(x+7) \\ 6 \cdot x + 6 \cdot 7 \\ \hline 6x + 42 \\ \cancel{48x} \end{array}$	$\begin{array}{r} 4(2x-8) \\ 4 \cdot 2x - 4 \cdot 8 \\ \hline 8x - 32 \end{array}$	$\begin{array}{r} 9(y-6) \\ 9 \cdot y - 9 \cdot 6 \\ \hline 9y - 54 \end{array}$

IXL Lessons:

5th Grade → New! Multiply a decimal by a one-digit whole number using the distributive property.

6th Grade → Y.11