

THE DISTRIBUTIVE PROPERTY



$$\begin{array}{r} 8 \times 10 \\ 80 \end{array} + \begin{array}{r} 5 \times 10 \\ 50 \end{array} = 130$$

$10(6+x)$ means 10 times 6 and 10 times x
multiply the 10 by everything inside the bracket

New step:

1. multiply the number outside the brackets by **EVERYTHING** inside the brackets

Arrow Method

Example 1

Use the distributive property to write each expression as a sum of terms.

Sketch a diagram in each case.

a) $7(c + 2)$

b) $42(a + b)$


$$7(c + 2)$$

$$7c + 14$$


$$42(a + b)$$

$$42a + 42b$$

Expand.

a) $-3(x + 5)$


$$-3(x + 5)$$

$$-3x - 15$$

Arrow Method

b) $-4(-5 + a)$


$$-4(-5 + a)$$

$$+20 - 4a$$

Example 3

Expand.

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

$$6(x-3) = 3$$

$$6x - 18 = 3$$

~~+18~~ +18

$$\cancel{6x} = 21$$

~~6~~ 6

$$x = 3.5$$

b) $5(8-c) = 15$

$$5(8-c) = 15$$

$$40 - 5c = 15$$

~~-40~~ -40

$$\cancel{-5c} = -25$$

~~5~~ 5

$$c = 5$$

Practice Pg 342 #4, 6, 7, 8, 12-16

CHALLENGE #9, 18, 19