

# Multiplication Strategies

1) "Double-Double" is used to find the product when one of the factors is a 4.

ex.  $4 \times 7$

expression  $(2 \times 7) \times 2$

equation  $(2 \times 7) \times 2 = 28$

ex.  $4 \times 13$

$(2 \times 13) \times 2$

$(2 \times 13) \times 2 = 52$

2) "Double, Double, Double" - is used to find the product when one of the factors is an 8.

ex.  $7 \times 8$

expression  $[(2 \times 7) \times 2] \times 2$

equation  $[(2 \times 7) \times 2] \times 2 = 56$

\* ex.  $15 \times 8$

$[(2 \times 15) \times 2] \times 2$

$[(2 \times 15) \times 2] \times 2 = 120$

3) "Double Half" - is used to find the product by doubling one factor ( $\times 2$ ) and halving the other factor ( $\div 2$ ).

Double Half  
ex.  $3 \times 14$

$$\begin{array}{r} \downarrow \quad \downarrow \\ 6 \times 7 \end{array} \quad (42)$$

Halve Double  
ex.  $8 \times 14$

$$\begin{array}{r} 4 \times 28 \\ \downarrow \quad \downarrow \\ 2 \times 56 \\ 1 \times 112 \end{array}$$

Double Halve  
ex.  $9 \times 16$

$$\begin{array}{r} 18 \times 8 \\ 36 \times 4 \\ 72 \times 2 \\ 144 \times 1 \end{array}$$