Multiplication Strategies

(x0) Zero Facts

The product of any number and 0 is 0.

7x0=0

0x4=0

(x1) Ones Facts

The product of any number multiplied by 1 is that number.

6x1=6   1x2=2

(x2) Doubles

To multiply by 2, double the other number

7x2=14

(7+7=14)

2x3=6

(3+3=6)

(x3) <u>Doubles +1 Set</u>

To multiply by 3, double the number and add that number one more time.

$$3x4 = 2x4 +4 = 12$$

$$3x7 = 2x7 +7 = 21$$

(x4) Double-Double Facts

To multiply by 4, double it and then double the result

$4 \times 7 = (2 \times 7) \times 2 = 14 \times 2 = 28$

$4 \times 6 = (2 \times 6) \times 2 = 12 \times 2 = 24$

(x5) Half-Ten Facts

To multiply by 5, multiply the number by 10 and then divide the result in half. Or, divide the number in half and X 10.

$$5x7 = (10x7) \div 2 = 70 \div 2 = 35$$

or

$$5x7 = 10x (7 \div 2) = 10x3.5 = 35$$

(x6) Half-Tens Plus One Set Facts

To multiply by 6, use the strategy to x5 and add the number to the result.

$6 \times 7 = (10 \times 7) \div 2 + 7 = 35 + 7 = 42$

$6 \times 9 = (10 \times 9) \div 2 + 9 = 45 + 9 = 54$

x8 Double-Double-Double

To multiply by 8, double it, double the result and then double the result one last time.

$8 \times 5 = ((2 \times 5) \times 2) \times 2 = ((10 \times 2) \times 2) = 20 \times 2 = 40$

(x9) <u>Tens Minus One Set Facts</u>

To multiply by 9, multiply it first by x10 and then subtract the number from the result.

$$9 \times 7 = 10 \times 7 - 7 = 70 - 7 = 63$$

$$9 \times 9 = 10 \times 9 - 9 = 90 - 9 = 81$$

(x10) Ten Facts

To multiply by 10,
Count groups of ten
4x10=40
"10, 20, 30, 40"

(x11) Decade +1Set

To multiply by 11, multiply by 10 and add 1 set

12x11 = 12x10 = 120

then 120 + 12 = 132

12x11 = 132

(x12) Decade +2 Sets

To multiply by 12, multiply by 10 then add 2 sets

$9 \times 10 = 90$ then $90 + 9 = 99$

last $99 + 9 = 108$

$9 \times 12 = 108$