

## ***PATTERNS IN PRODUCTS USING MULTIPLES***

Multiples of 2 = 2, 4, 6, 8, 10, 12, 14...

all have an even number (0, 2, 4, 6, 8) in the ones place

Multiples of 3 = 3, 6, 9, 12, 15, 18, 21, 24, 27, 30...

all products can be reduced to a single number divisible by 3

12:  $1+2=3$ , 15:  $1+5=6$ , 18:  $1+8=9$ , 21:  $2+1=3$ , 24:  $2+4=6$

all even multiples ( $2 \times 3$ ,  $4 \times 3$ ,  $6 \times 3$ , etc.) are also multiples of 6

Multiples of 4 = 4, 8, 12, 16, 20, 24, 28...

all have an even number (0, 2, 4, 6, 8) in the ones place

Multiples of 5 = 5, 10, 15, 20, 25, 30...

all have 5 or 0 in the ones place

Multiples of 6 = 6, 12, 18, 24, 30, 36, 42...

all products are even

add the digits in each product for a sum of 3 or 6 or 9

12:  $1+2=3$ , 18:  $1+8=9$ , 24:  $2+4=6$ , 30:  $3+0=3$

Multiples of 8 = 8, 16, 24, 32, 40, 48...

all products are even

use your knowledge of multiples of 2 to

double/double/double the number

$8 \times 4 = 4$  doubled (8), 8 doubled (16), 16 doubled (32)

$8 \times 6 = 6$  doubled (12), 12 doubled (24), 24 doubled (48)

Multiples of 9 = 9, 18, 27, 36, 45, 54...

digits in each product add to 9

$1+8=9$ ,  $2+7=9$ ,  $3+6=9$ ,  $4+5=9$

Multiples of 10 = 10, 20, 30, 40, 50...

all end in 0

