

SATISH CHANDRA MEMORIAL SCHOOL

CH9: HOW MANY TIMES?

TOPIC:

- EXPANDED FORM MULTIPLICATION
- PATTERN COMPLETION
- DATE: 2.6.21

EXPANDED FORM MULTIPLICATION :-

1) 34×2

Process 1: $34 \rightarrow 30 + 4$ Expanded Form

Step 1

	30	4	
2	30×2	4×2	
	60	8	\rightarrow Products

Step 2 (Add the products)

$$\begin{array}{r} 60 \\ + 8 \\ \hline 68 \end{array}$$

$34 \times 2 = 68$

Process 2: OR

$\begin{array}{r} 34 \\ \times 2 \\ \hline 60 \\ + 8 \\ \hline 68 \end{array}$	$\begin{array}{l} (30 + 4) \\ (30 \times 2 = 60) \\ (4 \times 2 = 8) \end{array}$
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* Follow any one process, which you find easier.

2) 567×8

Process 1:

$567 = 500 + 60 + 7$

	500	60	7	
8	500×8	60×8	8×7	
	4000	480	56	→ Products

$$\begin{array}{r} \textcircled{1} \\ - 4000 \\ \quad 480 \\ \quad + 56 \\ \hline 4536 \end{array}$$

$567 \times 8 = 4536$

Process 2:

567	
$\times 8$	$(500 + 60 + 7)$
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4000	$(500 \times 8 = 4000)$
480	$(60 \times 8 = 480)$
$+ 56$	$(7 \times 8 = 56)$
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4536	

Complete the following patterns:-

a) $30, 60, 90, \underline{\quad}, \underline{\quad}, \underline{\quad}$

Exp: $30 \times 1 = 30$

$30 \times 2 = 60$

$30 \times 3 = 90$

$30 \times 4 = 120$

$30 \times 5 = 150$

$30 \times 6 = 180$

Ans: $30, 60, 90, \underline{120}, \underline{150}, \underline{180}$

WS: 86

1) 307×9 [Solve by expanded form multiplication]

2) 172×4 [Solve by expanded form multiplication]

Complete the pattern:-

1) 20, 40, 60, —, —, —, —

2) 15, 30, 45, —, —, —, —

3) 100, 150, 200, —, —, —, —

Check your answers (WS36)

Solve by Expanded form multiplication:

1) 307×9

$$307 = 300 + 0 + 7$$

	300	0	7
9	300×9	0×9	7×9
	2700	0	63

$$\begin{array}{r} 2700 \\ 00 \\ + 63 \\ \hline 2763 \end{array}$$

Ans: $307 \times 9 = 2763$

2) 172×4

$$172 = 100 + 70 + 2$$

	100	70	2
4	100×4	70×4	2×4
	400	280	8

$$\begin{array}{r} 400 \\ 280 \\ + 8 \\ \hline 688 \end{array}$$

Ans: $172 \times 4 = 688$

Complete the pattern:-

1) 20, 40, 60, 80, 100, 120,
[Tables of 20]

2) 15, 30, 45, 60, 75, 90,
[Tables of 15]

3) 100, 150, 200, 250, 300, 350, 400,
[Add 50 to each number to get the next number]