

Challenge!

- $32,458 - 18,750 = 13,708$ – Digit at hundreds place is 7
- (a) Greatest possible number = 97531
(b) $7000 - 7 = 6993$

Worksheet

(C) $\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \\ 1 \ 3 \ 9 \ 6 \ 5 \\ + \quad 6 \ 7 \ 2 \ 8 \\ \hline 2 \ 0 \ 6 \ 9 \ 3 \end{array}$	(T) $\begin{array}{r} \textcircled{8} \textcircled{14} \textcircled{9} \textcircled{12} \\ 8 \ \cancel{9} \ \cancel{5} \ \cancel{0} \ \cancel{2} \\ - \quad 3 \ 4 \ 8 \ 1 \ 6 \\ \hline 5 \ 4 \ 6 \ 8 \ 6 \end{array}$	(D) $\begin{array}{r} \textcircled{5} \textcircled{11} \textcircled{8} \textcircled{15} \textcircled{8} \textcircled{12} \\ \cancel{6} \ \cancel{1} \ \cancel{9} \ \cancel{8} \ \cancel{9} \ \cancel{2} \\ - \quad 7 \ 5 \ 6 \ 0 \ 9 \\ \hline 5 \ 4 \ 3 \ 9 \ 8 \ 3 \end{array}$	(B) $\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \textcircled{1} \\ 2 \ 7 \ 8 \ 7 \ 7 \\ + \quad 8 \ 9 \ 6 \ 5 \ 7 \\ \hline 1 \ 1 \ 7 \ 5 \ 3 \ 4 \end{array}$
(Y) $\begin{array}{r} \textcircled{4} \textcircled{9} \textcircled{10} \textcircled{12} \textcircled{12} \\ \cancel{5} \ \cancel{0} \ \cancel{1} \ \cancel{3} \ \cancel{2} \\ - \quad 2 \ 9 \ 4 \ 6 \ 9 \\ \hline 2 \ 0 \ 6 \ 6 \ 3 \end{array}$	(R) $\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \\ 2 \ 9 \ 5 \ 0 \ 3 \ 4 \\ + \quad 1 \ 9 \ 6 \ 8 \ 7 \ 5 \\ \hline 4 \ 9 \ 1 \ 9 \ 0 \ 9 \end{array}$	(S) $\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \textcircled{1} \\ 6 \ 3 \ 5 \ 5 \ 4 \\ + \quad 2 \ 8 \ 5 \ 7 \ 6 \\ \hline 9 \ 2 \ 1 \ 3 \ 0 \end{array}$	(I) $\begin{array}{r} \textcircled{4} \textcircled{16} \textcircled{9} \textcircled{10} \textcircled{9} \textcircled{12} \\ \cancel{5} \ \cancel{7} \ \cancel{0} \ \cancel{1} \ \cancel{0} \ \cancel{2} \\ - \quad 2 \ 8 \ 9 \ 2 \ 1 \ 3 \\ \hline 2 \ 8 \ 0 \ 8 \ 8 \ 9 \end{array}$
(E) $\begin{array}{r} \textcircled{9} \textcircled{9} \textcircled{9} \textcircled{9} \textcircled{10} \\ \cancel{1} \ \cancel{0} \ \cancel{0} \ \cancel{0} \ \cancel{0} \ \cancel{0} \\ - \quad 6 \ 9 \ 7 \ 2 \ 5 \\ \hline 3 \ 0 \ 2 \ 7 \ 5 \end{array}$	(K) $\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \\ 3 \ 5 \ 7 \ 6 \ 0 \\ + \quad 9 \ 9 \ 8 \ 5 \ 0 \\ \hline 1 \ 3 \ 5 \ 6 \ 1 \ 0 \end{array}$	(O) $\begin{array}{r} \textcircled{4} \textcircled{9} \textcircled{12} \textcircled{9} \textcircled{18} \textcircled{11} \\ \cancel{5} \ \cancel{0} \ \cancel{3} \ \cancel{0} \ \cancel{9} \ \cancel{1} \\ - \quad 2 \ 0 \ 4 \ 5 \ 9 \ 3 \\ \hline 2 \ 9 \ 8 \ 4 \ 9 \ 8 \end{array}$	(A) $\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \\ 7 \ 0 \ 5 \ 1 \ 8 \\ + \quad 7 \ 0 \ 6 \ 9 \ 3 \\ \hline 1 \ 4 \ 1 \ 2 \ 1 \ 1 \end{array}$
(N) $\begin{array}{r} \textcircled{2} \textcircled{9} \textcircled{9} \textcircled{15} \\ \cancel{3} \ \cancel{0} \ \cancel{0} \ \cancel{5} \ 9 \\ - \quad 1 \ 8 \ 9 \ 7 \ 5 \\ \hline 1 \ 1 \ 0 \ 8 \ 4 \end{array}$	(H) $\begin{array}{r} \textcircled{1} \textcircled{1} \textcircled{1} \textcircled{1} \textcircled{1} \\ 3 \ 9 \ 8 \ 6 \ 1 \ 7 \\ + \quad 2 \ 7 \ 5 \ 8 \ 9 \ 6 \\ \hline 6 \ 7 \ 4 \ 5 \ 1 \ 3 \end{array}$	(G) $\begin{array}{r} \textcircled{7} \textcircled{9} \textcircled{9} \textcircled{9} \textcircled{10} \\ \cancel{8} \ \cancel{0} \ \cancel{0} \ \cancel{0} \ \cancel{0} \\ - \quad 5 \ 9 \ 7 \ 2 \ 6 \\ \hline 2 \ 0 \ 2 \ 7 \ 4 \end{array}$	

H $\begin{array}{r} 6,74,513 \end{array}$	I $\begin{array}{r} 2,80,889 \end{array}$	K $\begin{array}{r} 1,35,610 \end{array}$	I $\begin{array}{r} 2,80,889 \end{array}$	N $\begin{array}{r} 11,084 \end{array}$	G $\begin{array}{r} 20,274 \end{array}$
R $\begin{array}{r} 4,91,909 \end{array}$	E $\begin{array}{r} 30,275 \end{array}$	A $\begin{array}{r} 1,41,211 \end{array}$	I $\begin{array}{r} 2,80,889 \end{array}$	N $\begin{array}{r} 11,084 \end{array}$	G $\begin{array}{r} 20,274 \end{array}$
T $\begin{array}{r} 54,686 \end{array}$	H $\begin{array}{r} 6,74,513 \end{array}$	E $\begin{array}{r} 30,275 \end{array}$	T $\begin{array}{r} 54,686 \end{array}$	R $\begin{array}{r} 4,91,909 \end{array}$	E $\begin{array}{r} 30,275 \end{array}$
R $\begin{array}{r} 4,91,909 \end{array}$	O $\begin{array}{r} 2,98,498 \end{array}$	B $\begin{array}{r} 1,17,534 \end{array}$	O $\begin{array}{r} 2,98,498 \end{array}$	T $\begin{array}{r} 54,686 \end{array}$	S $\begin{array}{r} 92,130 \end{array}$

Chapter 3: Multiplication

Warm-up

Total cost = $8 \times ₹65 + 10 \times ₹25 + 16 \times ₹45 + 20 \times ₹18 + 2 \times ₹378 + 14 \times ₹155$

= ₹520 + ₹250 + ₹720 + ₹360 + ₹756 + ₹2170 = ₹4776 < ₹5000. Yes, amount is enough.

Class Work (Page 50)

1. (a) $2 \times (3 \times 10) = (2 \times 3) \times 10$ Associative property of multiplication
(b) $1478 \times 1 = 1478$ Property of 1 in multiplication
(c) $3 \times 11 = 3 \times (10 + 1)$ Multiplication distribution over addition
2. (a) $3 \times 9 = 27$ (b) $6 \times 8 = 48$ (c) $8 \times 9 = 72$ (d) $11 \times 3 = 33$ (e) $9 \times 6 = 54$
(f) $12 \times 4 = 48$ (g) $5 \times 4 = 20$ (h) $10 \times 7 = 70$ (i) $17 \times 8 = 136$ (j) $15 \times 9 = 135$
(k) $19 \times 6 = 114$ (l) $16 \times 9 = 144$ (m) $18 \times 4 = 72$ (n) $19 \times 9 = 171$ (o) $20 \times 8 = 160$

Class Work (Page 51)

1. $3 \times 10 = 30$
2. $7 \times 100 = 700$
3. $8 \times 1000 = 8,000$
4. $673 \times 100 = 67,300$
5. $807 \times 1000 = 8,07,000$
6. $396 \times 10,000 = 39,60,000$
7. $900 \times 100 = 90,000$
8. $29 \times 2 \times 1000 = 58,000$
9. $496 \times 20 = (496 \times 2) \times 10 = 992 \times 10 = 9,920$
10. $503 \times 30 = (503 \times 3) \times (10) = 1509 \times 10 = 15,090$

Exercise 3A

1. (a) $2 + 2 + 2 = 3 \times 2$ (b) $3 + 3 + 3 + 3 = 4 \times 3$
(c) $1 + 1 + 1 + 1 + 1 = 5 \times 1$ (d) $7 + 7 + 7 = 3 \times 7$
2. (a) $2 \times 4 = 4 + 4 = 8$ (b) $4 \times 2 = 2 + 2 + 2 + 2 = 8$
(c) $3 \times 5 = 5 + 5 + 5 = 15$ (d) $6 \times 8 = 8 + 8 + 8 + 8 + 8 + 8 = 48$
3. (a) $6 \times 4 = 4 \times 6$ (b) $15 \times 27 = 27 \times 15$
4. (a) $27 \times 0 = 0$ (b) $2317 \times 1 = 2317$
5. (a) T, $(2 \times 4) \times 5 = 2 \times (4 \times 5)$ Grouping property
(b) T, $3 \times 15 = 15 \times 3$ Order property
(c) T, $5815 \times 1 = 5815$ Property of 1 in multiplication
(d) T, $44 \times 15 = 44 \times (10 + 5)$ Distributive property
6. $2 \times (4 + 3) = 2 \times 7 = 14$ Distributive property of over multiplication on addition
7. (a) $40 \times 80 = (4 \times 8) \times 100 = 3,200$ (b) $600 \times 300 = 1,80,000$
(c) $170 \times 300 = 51,000$ (d) $1200 \times 90 = 1,08,000$
8. Total distance jogged $= 20 \times 90 = 1800$ km
9. (a) $4 \times 6 > 8 \times 2$ (b) $9 \times 5 < 8 \times 6$
(c) $1 \times 7 > 0 \times 8$ (d) $7 + 8 = 5 \times 3$
10. (b) 11. (b)

Challenge!

- (b) Muffins in 1 box = 12.
Total number of muffins in 8 boxes $= 8 \times 12 = 96$
Muffins left = 5
Muffins eaten by her friends $= 96 - 5 = 91$

Class Work (Page 54)

$$\begin{array}{r} 1. \quad 6 \ 1 \ 5 \ 9 \\ \times 4 \\ \hline 2 \ 4 \ 6 \ 3 \ 6 \end{array}$$

$$\begin{array}{r} 2. \quad 7 \ 9 \ 6 \ 7 \ 5 \\ \times 9 \\ \hline 7 \ 1 \ 7 \ 0 \ 7 \ 5 \end{array}$$

$$\begin{array}{r} 3. \quad 3 \ 5 \ 8 \\ \times 7 \ 6 \\ \hline 2 \ 1 \ 4 \ 8 \\ + 2 \ 5 \ 0 \ 6 \\ \hline 2 \ 7 \ 2 \ 0 \ 8 \end{array}$$

Exercise 3B

$$\begin{array}{r} 1. \ (a) \ 1 \ 8 \ 3 \ 8 \\ \times 4 \\ \hline 7 \ 3 \ 5 \ 2 \end{array}$$

$$\begin{array}{r} (b) \ 7 \ 5 \ 9 \ 8 \\ \times 3 \\ \hline 2 \ 2 \ 7 \ 9 \ 4 \end{array}$$

$$\begin{array}{r} (c) \ 5 \ 0 \ 0 \ 9 \\ \times 8 \\ \hline 4 \ 0 \ 0 \ 7 \ 2 \end{array}$$

$$\begin{array}{r} (d) \ 5 \ 8 \ 7 \ 9 \ 9 \\ \times 8 \\ \hline 4 \ 7 \ 0 \ 3 \ 9 \ 2 \end{array}$$

$$\begin{array}{r} (e) \quad 3 \ 4 \ 5 \\ \times 5 \ 5 \\ \hline 1 \ 7 \ 2 \ 5 \\ + 1 \ 7 \ 2 \ 5 \\ \hline 1 \ 8 \ 9 \ 7 \ 5 \end{array}$$

$$\begin{array}{r} (f) \quad 7 \ 0 \ 8 \\ \times 2 \ 9 \\ \hline 6 \ 3 \ 7 \ 2 \\ + 1 \ 4 \ 1 \ 6 \\ \hline 2 \ 0 \ 5 \ 3 \ 2 \end{array}$$

$$\begin{array}{r} (g) \quad 2 \ 0 \ 5 \ 9 \\ \times 7 \ 6 \\ \hline 1 \ 2 \ 3 \ 5 \ 4 \\ + 1 \ 4 \ 4 \ 1 \ 3 \\ \hline 1 \ 5 \ 6 \ 4 \ 8 \ 4 \end{array}$$

$$\begin{array}{r} (h) \quad 8 \ 7 \ 9 \ 5 \\ \times 6 \ 4 \\ \hline 3 \ 5 \ 1 \ 8 \ 0 \\ + 5 \ 2 \ 7 \ 7 \ 0 \\ \hline 5 \ 6 \ 2 \ 8 \ 8 \ 0 \end{array}$$

2. (a) Awake in each day = 15 h
Awake in (1 leap year = 366 days) = 5490 hours

$$\begin{array}{r} 3 \ 6 \ 6 \\ \times 1 \ 5 \\ \hline 1 \ 8 \ 3 \ 0 \\ + 3 \ 6 \ 6 \\ \hline 5 \ 4 \ 9 \ 0 \end{array}$$

- (b) Cost of one ticket = ₹35
Number of men = 215
Number of women = 396
Total number of men and women = 215 + 396 = 611
Total money collected = ₹35 × 611 = ₹21,385

$$\begin{array}{r} 6 \ 1 \ 1 \\ \times 3 \ 5 \\ \hline 3 \ 0 \ 5 \ 5 \\ + 1 \ 8 \ 3 \ 3 \\ \hline 2 \ 1 \ 3 \ 8 \ 5 \end{array}$$

3. Number of students = 35,718
Pocket money for 1 student = ₹25
Total amount collected = 35,718 × ₹25
= ₹8,92,950; Compassion

$$\begin{array}{r} 3 \ 5 \ 7 \ 1 \ 8 \\ \times 2 \ 5 \\ \hline 1 \ 7 \ 8 \ 5 \ 9 \ 0 \\ + 7 \ 1 \ 4 \ 3 \ 6 \\ \hline 8 \ 9 \ 2 \ 9 \ 5 \ 0 \end{array}$$

4. (b) {425 × 35 days (7 × 5 = 35 days) = ₹14,875}

Class Work (Page 57)

$$\begin{array}{r} 1. \quad 7 \ 6 \ 3 \\ \times 5 \ 9 \ 4 \\ \hline 3 \ 0 \ 5 \ 2 \\ 6 \ 8 \ 6 \ 7 \\ + 3 \ 8 \ 1 \ 5 \\ \hline 4 \ 5 \ 3 \ 2 \ 2 \ 2 \end{array}$$

$$\begin{array}{r} 2. \quad 8 \ 7 \ 2 \\ \times 8 \ 9 \ 3 \\ \hline 2 \ 6 \ 1 \ 6 \\ 7 \ 8 \ 4 \ 8 \\ + 6 \ 9 \ 7 \ 6 \\ \hline 7 \ 7 \ 8 \ 6 \ 9 \ 6 \end{array}$$

$$\begin{array}{r} 3. \quad 9 \ 0 \ 7 \\ \times 6 \ 7 \ 3 \\ \hline 2 \ 7 \ 2 \ 1 \\ 6 \ 3 \ 4 \ 9 \\ + 5 \ 4 \ 4 \ 2 \\ \hline 6 \ 1 \ 0 \ 4 \ 1 \ 1 \end{array}$$

$$\begin{array}{r} 4. \quad 5 \ 4 \ 3 \ 0 \\ \times 1 \ 6 \ 5 \\ \hline 2 \ 7 \ 1 \ 5 \ 0 \\ 3 \ 2 \ 5 \ 8 \ 0 \\ + 5 \ 4 \ 3 \ 0 \\ \hline 8 \ 9 \ 5 \ 9 \ 5 \ 0 \end{array}$$