

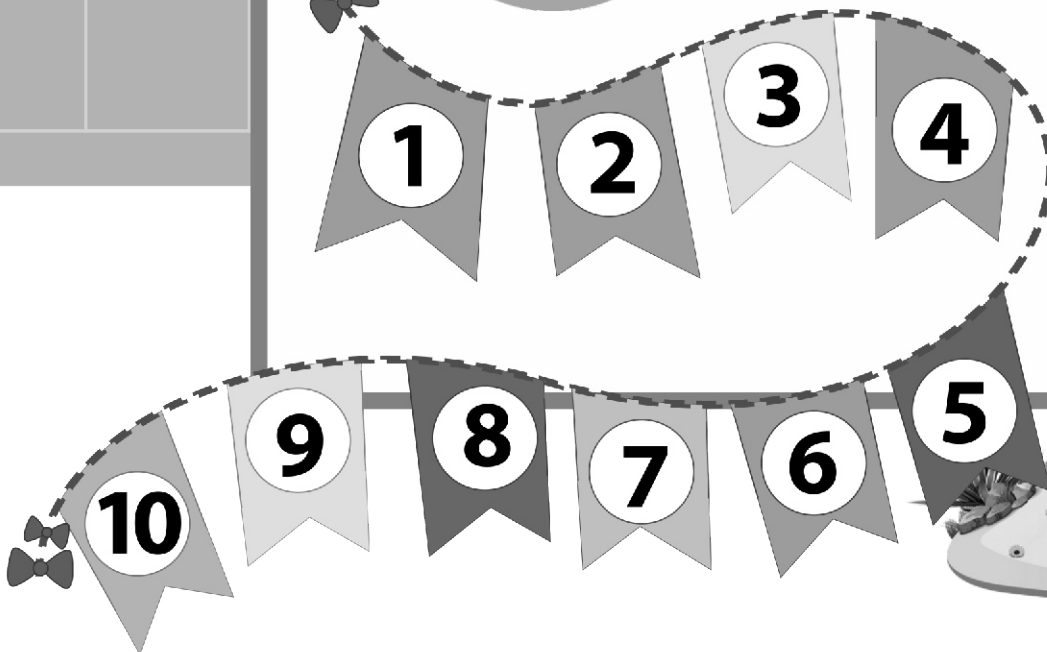
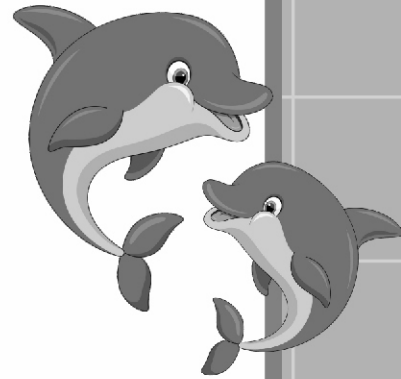
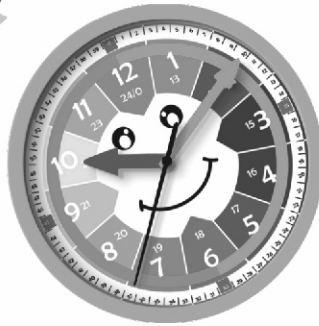
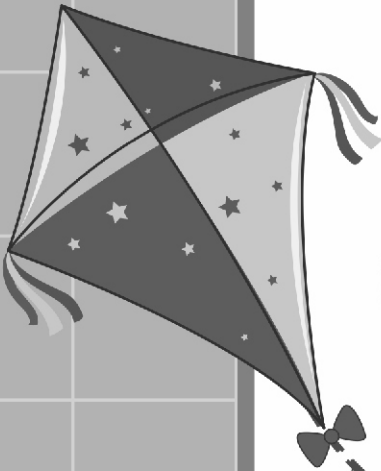


$$3 - 2 = 1$$



Foundation Mathematics

3



1. Large Numbers

Task-1

1. Starting at 1500 skip-count by 100 and fill in the missing number :

1500	1600	1700	1800	1900	2000
2100	2200	2300	2400	2500	2600
2700	2800	2900	3000	3100	3200
3300	3400	3500	3600	3700	3800
3900	4000	4100	4200	4300	4400
4500	4600	4700	4800	4900	5000
5100	5200	5300	5400	5500	5600
5700	5800	5900	6000	6100	6200

Learning Target 1.1

Do it yourself

Just 4 fun

No.

Learning through puzzle

9000.

Task-2

	Thousand	Hundreds	Tens	Ones
2. 8092 =	8000	+ 0	+ 90	+ 2
3. 1729 =	1000	+ 700	+ 20	+ 9
4. 6174 =	6000	+ 100	+ 70	+ 4
5. 1010 =	1000	+ 0	+ 10	+ 0

Task-3

2. $5792 - 10 = 5782$, $5792 + 10 = 5802$
 $5792 - 1 = 5791$, $5792 + 1 = 5793$
3. $7492 - 10 = 7482$, $7492 + 10 = 7502$
 $7492 - 1 = 7491$, $7492 + 1 = 7493$
4. $2999 - 10 = 2989$, $2999 + 10 = 3009$
 $2999 - 1 = 2998$, $2999 + 1 = 3000$

5. $8425 - 10 = 8415$, $8425 + 10 = 8435$
 $8425 - 1 = 8424$, $8425 + 1 = 8426$
6. $1627 - 10 = 1617$, $1627 + 10 = 1637$
 $1627 - 1 = 1626$, $1627 + 1 = 1628$

Task-4

Predecessor	Number	Successor
$1309 - 1 = 1308$	(a) 1309	$1309 + 1 = 1310$
$5607 - 1 = 5606$	(b) 5607	$5607 + 1 = 5608$
$6222 - 1 = 6221$	(c) 6222	$6222 + 1 = 6223$
$8125 - 1 = 8124$	(d) 8125	$8125 + 1 = 8126$
$9658 - 1 = 9657$	(e) 9658	$9658 + 1 = 9659$
$7225 - 1 = 7224$	(f) 7225	$7225 + 1 = 7226$
$4528 - 1 = 4527$	(g) 4528	$4528 + 1 = 4529$

Learning Target 1.2

1. (a) Nine thousand eight hundred forty six
 (b) Four thousand seven hundred fifty two
 (c) Fifty four thousand two hundred fifteen
 (d) Sixty thousand three hundred forty seven
 (e) Four thousand five hundred seventy two
 (f) Thirty thousand seven
2. (a) 4562 (b) 6677 (c) 38241 (d) 90115
3.

	Face value	Place value
(a) 7091	9	$9 \times 10 = 90$
(b) 349	3	$3 \times 100 = 300$
(c) 63456	3	$3 \times 1000 = 3000$
(d) 87240	0	$0 \times 1 = 0$
(e) 59308	0	$0 \times 10 = 0$
- \therefore Face value is the number itself.
4. (a) $91,405 = 9 \times 10000 + 1 \times 1000 + 4 \times 100 + 0 \times 10 + 5 \times 1$
 $= 90000 + 1000 + 400 + 0 + 5$
- (b) $87,515 = 8 \times 10000 + 7 \times 1000 + 5 \times 100 + 1 \times 10 + 5 \times 1$
 $= 80000 + 7000 + 500 + 10 + 5$
- (c) $98,241 = 9 \times 10000 + 8 \times 1000 + 2 \times 100 + 4 \times 10 + 1 \times 1$
 $= 90000 + 8000 + 200 + 40 + 1$
5. (a) 7444 (b) 37654 (c) 99999
6. $32,526 - 10 = 32516$, $32526 - 100 = 32426$
 $32,526 + 1000 = 33,526$, $32526 + 10 = 32536$
 $32,526 + 100 = 32626$, $32526 - 1000 = 31526$

Learning Target 1.3

1. (a) $90091 < 99001$ (b) $8999 > 8998$
 (c) $45123 < 45320$ (d) $3223 < 3232$
2. **Greatest number** **Smallest number**
 (a) 9420 2049
 (b) 9431 1349
 (c) 9730 3079
3. (a) $25472 < 26489 < 28175 < 29804$
 (b) $7893 > 6457 > 4645 > 2910$
 (c) $7327 > 7215 > 5689 > 4218$
 (d) $1029 < 4576 < 6354 < 9378$
 (e) $3698 > 6983 > 8369 > 8693$

Learning through puzzle

4	0	2	1	7	0	5	2	8	3	2	8	3
0	1	8	7	6	2	4	6	6	4	9	6	6
7	7	1	4	7	9	9	0	0	5	5	7	4
3	5	1	1	7	0	8	2	0	8	0	7	5
9	9	7	8	4	2	8	6	0	4	9	5	3
1	3	9	3	9	0	0	6	6	8	2	6	0
1	7	2	7	7	6	5	8	1	3	0	4	0
7	6	8	7	9	6	1	0	6	9	8	4	9
9	3	0	6	6	5	1	6	5	2	4	7	7
1	4	1	8	8	6	6	1	7	9	3	7	6
0	3	9	3	5	5	3	7	8	5	7	7	0
5	1	2	5	2	7	7	9	0	6	9	1	3
6	6	5	8	2	3	3	9	2	6	9	1	4

Catch The Concept

1. 999 2. 100 3. 9999 4. 1000
5. 99999 6. 10000 7. Smallest 8. 10
9. 10 10. place \times value of digit 11. $5 \times 100 = 500$
12. 325 13. greater 14. Smaller
15. equal

Apply Your Mind!

1. 548
2. Largest number in all four cards = 9642
 Successor = $9642 + 1 = 9643$
3. 4192



2.

Addition

Task-1

1. $100 + 800$	$= 900$	2. $500 + 300$	$= 800$
$20 + 90$	$= 110$	$40 + 20$	$= 60$
$3 + 2$	$= \underline{5}$	$9 + 3$	$= \underline{12}$
	$\underline{1015}$		$\underline{872}$
3. $100 + 200$	$= 300$	4. $400 + 500$	$= 900$
$50 + 30$	$= 80$	$10 + 10$	$= 20$
$4 + 8$	$= \underline{12}$	$1 + 2$	$= \underline{3}$
	$\underline{392}$		$\underline{923}$

Just 4 fun

$$\begin{array}{r} 888 \\ + 88 \text{ Yes} \\ + 8 \\ + 8 \\ + 8 \\ \hline 1000 \end{array}$$

Task-2

1. 3824	2. 2018	3. 1214
$+ 1492$	$+ 2017$	$+ 2453$
$\underline{5316}$	$\underline{4035}$	$\underline{3667}$
4. 7129	5. 1432	6. 3789
$+ 1729$	$+ 4132$	$+ 4873$
$\underline{8858}$	$\underline{5564}$	$\underline{8662}$

Learning through puzzle

Pair from grid whose sum is 9999

$$2121 + 7878 = 9999, \quad 2243 + 7756 = 9999$$

$$5125 + 4875 = 9999$$

Learning Target 2.1

1. (a) 252	(b) 564	(c) 613
$+ 346$	$+ 121$	$+ 226$
$\underline{598}$	$\underline{685}$	$\underline{839}$

$$\begin{array}{r} 2. \text{ (a)} \quad 2 \ 3 \ 4 \ 2 \\ + \quad 5 \ 1 \ 0 \ 3 \\ \hline 7 \ 4 \ 4 \ 5 \end{array}$$

$$\begin{array}{r} \text{(b)} \quad 4 \ 2 \ 5 \ 3 \\ + 2 \ 1 \ 4 \ 6 \\ \hline 6 \ 3 \ 9 \ 9 \end{array}$$

$$\begin{array}{r} \text{(c)} \quad 6 \ 1 \ 0 \ 4 \\ + 1 \ 5 \ 1 \ 6 \\ \hline 7 \ 6 \ 2 \ 0 \end{array}$$

$$\begin{array}{r} \text{(d)} \quad 8 \ 1 \ 7 \ 2 \\ + 1 \ 5 \ 1 \ 6 \\ \hline 9 \ 6 \ 8 \ 8 \end{array}$$

$$\begin{array}{r} 3. \text{ (a)} \quad \text{Th H T O} \\ 4 \ 2 \ 2 \ 9 \\ \quad \quad 4 \ 3 \ 2 \\ + \quad \quad 7 \ 0 \ 7 \\ \hline 5 \ 3 \ 6 \ 8 \end{array}$$

$$\begin{array}{r} \text{(b)} \quad \text{Th H T O} \\ 2 \ 4 \ 9 \ 8 \\ \quad \quad 3 \ 2 \ 7 \ 8 \\ + 2 \ 9 \ 7 \ 5 \\ \hline 8 \ 7 \ 5 \ 1 \end{array}$$

$$\begin{array}{r} \text{(c)} \quad \text{TTh Th H T O} \\ 2 \ 3 \ 3 \ 5 \ 6 \\ \quad \quad 2 \ 2 \ 9 \ 8 \ 0 \\ + 4 \ 3 \ 0 \ 9 \ 0 \\ \hline 8 \ 9 \ 4 \ 2 \ 6 \end{array}$$

$$\begin{array}{r} 4. \text{ (a)} \quad 2 \ 1 \ 4 \ 8 \ 8 \\ \quad \quad \quad 2 \ 0 \ 3 \ 8 \\ + \quad \quad 5 \ 4 \ 2 \ 1 \ 7 \\ \hline 7 \ 7 \ 7 \ 4 \ 3 \end{array}$$

$$\begin{array}{r} \text{(b)} \quad 2 \ 2 \ 9 \ 9 \ 7 \\ \quad \quad \quad 3 \ 9 \ 8 \ 0 \\ + 1 \ 9 \ 7 \ 0 \\ \hline 2 \ 8 \ 9 \ 4 \ 7 \end{array}$$

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

$$\begin{array}{r} 5. \text{ (a)} \quad 2374 \\ \text{(d)} \quad 6880 \end{array}$$

$$\begin{array}{r} \text{(b)} \quad 6472 \\ \text{(e)} \quad 2467 \end{array}$$

$$\text{(c)} \quad 7432$$

Learning Target 2.2

1. A dairy booth sells bottles of milk on 1st day
A dairy booth sells bottles of milk on 2nd day.
Total number of milk bottles

$$\begin{array}{r} \text{Th H T O} \\ 1 \ 2 \ 8 \ 1 \\ + 4 \ 1 \ 8 \\ \hline 1 \ 6 \ 9 \ 9 \end{array}$$

2. Books of English in library
Books of Mathematics in library
Books of Science in library
Total number of books in library

$$\begin{array}{r} \text{Th H T O} \\ = \quad 3 \ 0 \ 5 \\ = \quad 2 \ 7 \ 6 \\ = \quad + 2 \ 4 \ 0 \\ = \quad \quad 8 \ 2 \ 1 \end{array}$$

3. Tourists visited cultural fair on 1st day
Tourists visited cultural fair on 2nd day
Tourists visited cultural fair on 3rd day
Total number of tourists visited

$$\begin{array}{r} \text{Th H T O} \\ = \quad 1 \ 6 \ 4 \ 2 \\ = \quad 2 \ 1 \ 5 \ 0 \\ = \quad + 2 \ 1 \ 0 \ 7 \\ = \quad \quad 5 \ 8 \ 9 \ 9 \end{array}$$

4. Akash scored runs in test matches
Akash scored runs in one day matches
Total score of Akash

$$\begin{array}{r} \text{Th H T O} \\ = \quad 3 \ 2 \ 5 \\ = \quad + 1 \ 7 \ 6 \\ = \quad \quad 5 \ 0 \ 1 \end{array}$$

	Th HT O
5. People living in Ist Sector	= 7 8 2 4
People living in IInd Sector	= 3 6 2 5
People living in IIIrd Sector	= + 1 1 2 3
Total number of people	= <u>12 5 7 2</u>

	Th HT O
6. Population of males in a village	4 2 7 6
Population of females in a village	+ <u>2 9 8 5</u>
Total population	<u>7 2 6 1</u>

	TTh Th HT O
7. Greatest 4-digit number	= 9 9 9 9
Least 4-digit number	= + <u>1 0 0 0</u>
Total sum	= <u>1 0 9 9 9</u>

	TTh Th HT O
8. Books of English in library	= 3 4 7 5
Books of Hindi in library	= 3 4 8 6
Books of Mathematics in library	= + <u>3 8 6 2</u>
Total number of books	= <u>1 0 8 2 3</u>

	Th HT O
9. At the national flower fest, red roses	= 2 4 1 2
At the national flower fest, yellow roses	= 8 8 7
At the national flower fest, pink roses	= + <u>1 0 5 0</u>
Total number of flowers	<u>4 3 4 9</u>

Learning Target 2.3

1. Newspaper agent supplies newspaper every month	= 3 4 5 6
Newspaper agent supplies magazines every month	= + <u>2 3 4 5</u>
Total number of supplies every month	= <u>5 8 0 1</u>
2. Distance from building A to building B	= 2 6 7 m
Distance from building B to building C	= + <u>3 6 7 m</u>
Total Distance from building A to building C	= <u>6 3 4 m</u>
3. Raj walked to reach the temple	= 9 4 3 m
He walked to reach the market	= + <u>2 5 8 m</u>
Total distance he walked	= <u>12 0 1 m</u>

4. Farmer produces bags of wheat	=	7 0 9
Farmer produces bags of pulses	=	6 8 5
Farmer produces bags of rice	=	+ 3 3 6
Total number of bags produced	=	<u>1 7 3 0</u>
5. (a) A garden has palm trees	=	3 6 5
A garden has mango trees	=	+ 5 8 2
Total number of trees	=	<u>9 4 7</u>
(b) A garden has plam trees	=	3 6 5
A garden has guava trees	=	+ 5 4 9
Total number of trees	=	<u>9 1 4</u>
(c) A garden has mango trees	=	5 8 2
A garden has guava trees	=	+ 5 4 9
Total number of trees	=	<u>1 1 3 1</u>

Catch The Concept

- | | | | |
|---------------|-----------|----------|----------------------------|
| 1. Addition | 2. Addend | 3. Same | 4. After number, successor |
| 5. Sum, total | 6. 0 | 7. 349 | 8. 440 |
| 9. ones | 10. Sum | 11. 5000 | 12. 1200 |

Apply Your Mind!

1. $A = 3$ $3\ 3 \rightarrow A$
 $B = 4$ $4\ 4\ 4 \rightarrow B$
 $C = 5$ $\begin{array}{r} + 5\ 5\ 5 \\ \hline 1\ 0\ 3\ 2 \end{array} \rightarrow C$
2. $2005 + 205 = 1500 + 710$ 3. (c)



3. Subtraction

Task-1

<p>1. $926 - 891$ $900 - 800 = 100$ $20 - 90 = -70$ $6 - 1 = \underline{5}$ <u>35</u></p>	<p>2. $549 - 323$ $500 - 300 = 200$ $40 - 20 = 20$ $9 - 3 = \underline{6}$ <u>226</u></p>
<p>3. $745 - 238$ $700 - 200 = 500$ $50 - 30 = 20$ $6 - 8 = \underline{-2}$ <u>518</u></p>	<p>4. $813 - 512$ $800 - 500 = 300$ $10 - 10 = 0$ $3 - 2 = \underline{1}$ <u>301</u></p>

Task-2

$$\begin{array}{r} 1. \ 2 \ 9 \ 6 \ 1 \\ - 1 \ 7 \ 3 \ 0 \\ \hline 1 \ 2 \ 3 \ 1 \end{array}$$

$$\begin{array}{r} 2. \ 5 \ 3 \ 4 \ 7 \\ - 3 \ 2 \ 0 \ 5 \\ \hline 2 \ 1 \ 4 \ 2 \end{array}$$

$$\begin{array}{r} 3. \ 6 \ 7 \ 9 \ 9 \\ - 2 \ 2 \ 3 \ 0 \\ \hline 4 \ 5 \ 6 \ 9 \end{array}$$

$$\begin{array}{r} 4. \ 3 \ 9 \ 9 \ 9 \\ - 1 \ 3 \ 8 \ 5 \\ \hline 2 \ 6 \ 1 \ 4 \end{array}$$

$$\begin{array}{r} 5. \ 5 \ 9 \ 9 \ 5 \\ - 1 \ 2 \ 5 \ 3 \\ \hline 4 \ 7 \ 4 \ 2 \end{array}$$

$$\begin{array}{r} 6. \ 7 \ 6 \ 9 \ 7 \\ - 5 \ 4 \ 8 \ 1 \\ \hline 2 \ 2 \ 1 \ 6 \end{array}$$

Learning through puzzle

$$35 - 27 = 08$$

Learning Target 3.1

$$\begin{array}{r} 1. \ (a) \ 8 \ 9 \ 9 \\ - 3 \ 4 \ 6 \\ \hline 5 \ 5 \ 3 \end{array}$$

$$\begin{array}{r} (b) \ 5 \ 7 \ 3 \\ - 1 \ 2 \ 1 \\ \hline 4 \ 5 \ 2 \end{array}$$

$$(c) \ 6 \ 1 \ 3 \ 2$$

$$\begin{array}{r} - 2 \ 2 \ 6 \ 0 \\ \hline 3 \ 8 \ 7 \ 2 \end{array}$$

$\therefore 3 < 6$ So we take 1 tens from left

it becomes $13 - 6 = 7$

$0 < 2$ So we take 1 hundred from left so it becomes $10 - 2 = 8$

Thousand place = $6 - 1 = 5$ Hence $5 - 2 = 3$

$$\begin{array}{r} 2. \ (a) \ 7 \ 8 \ 9 \ 5 \\ - 5 \ 1 \ 0 \ 3 \\ \hline 2 \ 7 \ 9 \ 2 \end{array}$$

$$\begin{array}{r} (b) \ 4 \ 2 \ 5 \ 8 \\ - 2 \ 1 \ 4 \ 5 \\ \hline 2 \ 1 \ 1 \ 3 \end{array}$$

$$\begin{array}{r} (c) \ 6 \ 9 \ 7 \ 4 \\ - 1 \ 2 \ 2 \ 3 \\ \hline 5 \ 7 \ 5 \ 1 \end{array}$$

$$\begin{array}{r} (d) \ 8 \ 6 \ 7 \ 5 \\ - 1 \ 2 \ 3 \ 4 \\ \hline 7 \ 4 \ 4 \ 1 \end{array}$$

$$\begin{array}{r} 3. \ (a) \ 7 \ 9 \ 7 \ 3 \\ - 5 \ 9 \ 2 \ 0 \\ \hline 2 \ 0 \ 5 \ 3 \end{array}$$

$$(b) \ 3 \ 1 \ 1 \ 5$$

$$\begin{array}{r} - 2 \ 4 \ 4 \ 2 \\ \hline 0 \ 6 \ 7 \ 3 \end{array}$$

$\therefore 1 < 4$ So we take 1 hundred from left

it becomes 11, So $11 - 4 = 7$

$0 < 4$ So we take 1 thousand from left it becomes 10, So $10 - 4 = 6$

Thousand place = $3 - 1 = 2$, Hence $2 - 2 = 0$

$$\begin{array}{r} (c) \ 7 \ 0 \ 2 \ 0 \\ - 1 \ 7 \ 2 \ 7 \\ \hline 5 \ 2 \ 9 \ 3 \end{array}$$

$\therefore 0 < 7$ So we take 1 ten from left it becomes 10. $10 - 7 = 3$

$1 < 2$ So we take 1 hundred from left it becomes 11, $11 - 2 = 9$

$$\begin{array}{r} \text{(d) } 9\ 3\ 7\ 1 \\ - 6\ 3\ 2\ 0 \\ \hline 3\ 0\ 5\ 1 \end{array}$$

$$\begin{array}{r} \text{(e) } 5\ 2\ 1\ 6 \\ - 4\ 5\ 2\ 5 \\ \hline 0\ 6\ 9\ 1 \end{array} \quad \begin{array}{l} \therefore 1 < 2 \text{ So we take 1 hundred from left} \\ \text{So it becomes 11, } 11 - 2 = 9 \\ 1 < 5 \text{ So we take 1 thousand from left} \\ \text{it becomes 11, } 11 - 5 = 6 \end{array}$$

$$\begin{array}{r} \text{(f) } 7\ 7\ 1\ 0 \\ - 2\ 2\ 2\ 3 \\ \hline 5\ 4\ 8\ 7 \end{array} \quad \begin{array}{l} \therefore 0 < 3 \text{ So we take 1 ten from left.} \\ \text{So it becomes 10, } 10 - 3 = 7 \\ 0 < 2 \text{ So we take 1 hundred from left.} \\ \text{So it becomes 10, } 10 - 2 = 8 \end{array}$$

$$\begin{array}{r} \text{4. (a) } 8\ 9\ 7\ 4 \\ - \quad \quad 0 \\ \hline 8\ 9\ 7\ 4 \end{array}$$

$$\begin{array}{r} \text{(b) } 7\ 4\ 7\ 3 \\ - 6\ 4\ 7\ 3 \\ \hline 1\ 0\ 0\ 0 \end{array}$$

$$\begin{array}{r} \text{(c) } 1\ 4\ 3\ 3 \\ - 1\ 0\ 0\ 0 \\ \hline 4\ 3\ 3 \end{array}$$

$$\begin{array}{r} \text{(d) } 1\ 0\ 0\ 0\ 0 \\ - \quad 6\ 8\ 7\ 7 \\ \hline 3\ 1\ 2\ 3 \end{array}$$

Learning Target 3.2

	Th H T O
	2 11 14 10
1. Students study in Ryan International school	= 3 2 5 0
Students study in Silver Bells school	= <u>-1 7 5 2</u>
number of students more in Ryan International school	= <u>1 4 9 8</u>

	Th H T O
	2 11
2. Mangoes on a tree	= 3 1 8
Mangoes fall down due to storm	= <u>- 1 2 8</u>
Mangoes left on the tree	= <u>1 9 0</u>

	Th H T O
	5 12 14
3. Run scored by batsman A	= 6 3 4 2
Run scored by batsman B	= <u>- 5 9 8 2</u>
Batsman A score more run by batsman B	= <u>3 6 0</u>

$$\begin{array}{r}
 \text{4. Total number of children participatd in competition} = 4 \ 8 \ 6 \ 3 \\
 \text{Number of boys in competition} = \underline{-1 \ 1 \ 3 \ 2} \\
 \text{Number of girls in competition} = \underline{\quad 3 \ 7 \ 3 \ 1}
 \end{array}$$

$$\begin{array}{r}
 \text{Th H T O} \\
 7 \ 12 \ 8 \ 15
 \end{array}$$

$$\begin{array}{r}
 \text{5. Sum of two number} = 8 \ 2 \ 9 \ 5 \\
 \text{One number} = \underline{-1 \ 7 \ 2 \ 9} \\
 \text{Other number} = \underline{\quad 6 \ 5 \ 6 \ 6}
 \end{array}$$

$$\begin{array}{r}
 \text{TTh Th H T O} \\
 8 \ 9 \ 9 \ 10
 \end{array}$$

$$\begin{array}{r}
 \text{6. Sai earend in one month} = 1 \ 9 \ 0 \ 0 \ 0 \\
 \text{He spent in one month} = \underline{-1 \ 2 \ 0 \ 9 \ 6} \\
 \text{Savings in one month} = \underline{\quad 0 \ 6 \ 9 \ 0 \ 4}
 \end{array}$$

Learning Target 3.3

1. $9 \ 0 \ 0 \ 0$	2. $3 \ 0 \ 0 \ 0$	3. $9 \ 0 \ 0 \ 0$
$\underline{-1 \ 4 \ 0 \ 9}$	$\underline{-1 \ 7 \ 7 \ 2}$	$\underline{-1 \ 3 \ 1 \ 0}$
$\underline{\quad 7 \ 5 \ 9 \ 1}$	$\underline{\quad 1 \ 2 \ 2 \ 8}$	$\underline{\quad 7 \ 6 \ 9 \ 0}$
4. $5 \ 0 \ 0 \ 0$	5. $5 \ 0 \ 0 \ 0$	6. $3 \ 0 \ 0 \ 0$
$\underline{-3 \ 4 \ 4 \ 6}$	$\underline{-2 \ 9 \ 8 \ 6}$	$\underline{-2 \ 4 \ 9 \ 9}$
$\underline{\quad 1 \ 5 \ 5 \ 4}$	$\underline{\quad 2 \ 0 \ 1 \ 4}$	$\underline{\quad 5 \ 0 \ 1}$

Catch The Concept

- | | | | |
|----------------|-------------------------------|---------------|---------------|
| 1. Subtraction | 2. Minuend | 3. Subtrahend | 4. Difference |
| 5. Same | 6. Befare number, predecessor | 7. 0 | |
| 8. 1 | 9. 100 | 10. 2245 | 11. 1 |

Apply Your Mind!

1. $a = 842$, $b = 715$, $c = 427$
- a
- $\therefore 2685 + 842 + 2973 = 6400$
- b
- $2685 + 715 + 3100 = 6500$
- c
- $2973 + 427 + 3100 = 6500$

2. 12 hundred 5 tens – 200

$$\begin{array}{r} 1250 \\ - 200 \\ \hline 1050 \end{array}$$

3. $\Delta = 8$, $\square = 5$

$$\therefore 8 + 8 + 8 + 8 + 5 = 37$$

$$8 + 5 = 13$$

4. A fish tank contains water
Water poured into fish tank
Total volume of fish tank

$$\begin{array}{r} = 470 \text{ mL} \\ = + 550 \text{ mL} \\ = \hline 1020 \text{ mL} \end{array}$$

Hence total volume of fish tank
Water spilled out from fish tank
Total volume of water left in fish tank

$$\begin{array}{r} = 1020 \text{ mL} \\ = - 250 \\ = \hline 770 \text{ mL} \end{array}$$

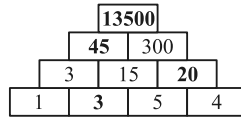
5. 1 Column = 2 unit

$$\begin{array}{r} \text{According to figure } 24 + 24 + 24 - 30 \\ = 72 - 30 \\ = 42 \end{array}$$

□

4. Multiplication

Learning through puzzle



Task-1

Do yourself

Task-2

Do yourself

Learning Target 4.1

1. (a) 24

$$\begin{array}{r} \times 10 \\ 00 \\ + 24 \\ \hline 240 \end{array}$$

(b) 100

$$\begin{array}{r} \times 38 \\ 800 \\ + 300 \\ \hline 3800 \end{array}$$

(c) 10

$$\begin{array}{r} \times 7 \\ \hline 70 \end{array}$$

(d) 243

$$\begin{array}{r} \times 10 \\ 000 \\ + 243 \\ \hline 2430 \end{array}$$

(e) $\begin{array}{r} 100 \\ \times 87 \\ \hline 700 \\ + 800 \\ \hline 8700 \end{array}$	(f) $\begin{array}{r} 1000 \\ \times 4 \\ \hline 4000 \end{array}$	(f) $\begin{array}{r} 30 \\ \times 10 \\ \hline 00 \\ + 30 \\ \hline 300 \end{array}$	(h) $\begin{array}{r} 10 \\ \times 0 \\ \hline 00 \end{array}$
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Just 4 fun

Take 11 from Box 1 and 33 from Box 2.

$11 \times 33 = 363$

2. (a) H T O $\begin{array}{r} 52 \\ \times 6 \\ \hline 312 \end{array}$	(b) H T O $\begin{array}{r} 64 \\ \times 9 \\ \hline 576 \end{array}$	(c) H T O $\begin{array}{r} 63 \\ \times 8 \\ \hline 504 \end{array}$
(d) H T O $\begin{array}{r} 92 \\ \times 7 \\ \hline 644 \end{array}$	(e) H T O $\begin{array}{r} 39 \\ \times 9 \\ \hline 351 \end{array}$	(f) H T O $\begin{array}{r} 69 \\ \times 6 \\ \hline 414 \end{array}$
3. (a) Th H T O $\begin{array}{r} 672 \\ \times 4 \\ \hline 2688 \end{array}$	(b) Th H T O $\begin{array}{r} 537 \\ \times 9 \\ \hline 4833 \end{array}$	(c) Th H T O $\begin{array}{r} 199 \\ \times 9 \\ \hline 1791 \end{array}$
(d) Th H T O $\begin{array}{r} 109 \\ \times 8 \\ \hline 872 \end{array}$	(e) Th H T O $\begin{array}{r} 531 \\ \times 4 \\ \hline 2124 \end{array}$	(f) Th H T O $\begin{array}{r} 896 \\ \times 3 \\ \hline 2688 \end{array}$
(h) Th H T O $\begin{array}{r} 1109 \\ \times 8 \\ \hline 8872 \end{array}$	(h) Th H T O $\begin{array}{r} 2018 \\ \times 4 \\ \hline 8072 \end{array}$	(i) Th H T O $\begin{array}{r} 3118 \\ \times 3 \\ \hline 9354 \end{array}$

Learning Target 4.2

1. (a) Th H T O $\begin{array}{r} 72 \\ \times 64 \\ \hline 288 \\ + 432 \\ \hline 4608 \end{array}$	(b) Th H T O $\begin{array}{r} 57 \\ \times 39 \\ \hline 513 \\ + 171 \\ \hline 2223 \end{array}$	(c) Th H T O $\begin{array}{r} 79 \\ \times 19 \\ \hline 711 \\ + 79 \\ \hline 1501 \end{array}$
--	---	--

<p>(d) Th H T O</p> $\begin{array}{r} 89 \\ \times 18 \\ \hline 712 \\ + 89 \\ \hline 1602 \end{array}$	<p>(e) Th H T O</p> $\begin{array}{r} 57 \\ \times 34 \\ \hline 228 \\ + 171 \\ \hline 1938 \end{array}$	<p>(f) Th H T O</p> $\begin{array}{r} 93 \\ \times 83 \\ \hline 279 \\ + 744 \\ \hline 7719 \end{array}$
--	---	---

<p>(g) Th H T O</p> $\begin{array}{r} 79 \\ \times 79 \\ \hline 711 \\ + 553 \\ \hline 6241 \end{array}$	<p>(h) Th H T O</p> $\begin{array}{r} 68 \\ \times 94 \\ \hline 272 \\ + 612 \\ \hline 6392 \end{array}$	<p>(i) Th H T O</p> $\begin{array}{r} 48 \\ \times 13 \\ \hline 144 \\ + 48 \\ \hline 624 \end{array}$
---	---	---

<p>2. (a) Th H T O</p> $\begin{array}{r} 216 \\ \times 24 \\ \hline 864 \\ + 432 \\ \hline 5184 \end{array}$	<p>(b) Th H T O</p> $\begin{array}{r} 827 \\ \times 19 \\ \hline 7443 \\ + 827 \\ \hline 15713 \end{array}$	<p>(c) Th H T O</p> $\begin{array}{r} 349 \\ \times 17 \\ \hline 2443 \\ + 349 \\ \hline 5933 \end{array}$
---	--	---

<p>3. (a)</p> $\begin{array}{r} 23 \\ \times 21 \\ \hline 23 \\ + 46 \\ \hline 483 \end{array}$	<p>(b)</p> $\begin{array}{r} 41 \\ \times 29 \\ \hline 369 \\ + 82 \\ \hline 1189 \end{array}$	<p>(c)</p> $\begin{array}{r} 31 \\ \times 12 \\ \hline 62 \\ + 31 \\ \hline 372 \end{array}$
---	--	--

<p>(d)</p> $\begin{array}{r} 30 \\ \times 11 \\ \hline 30 \\ 30 \\ \hline 330 \end{array}$	<p>(e)</p> $\begin{array}{r} 57 \\ \times 32 \\ \hline 114 \\ + 171 \\ \hline 1824 \end{array}$	<p>(f)</p> $\begin{array}{r} 83 \\ \times 36 \\ \hline 498 \\ + 249 \\ \hline 2988 \end{array}$
--	---	---

4. (a) 1 (b) 0 (c) 34 (d) 386
 (e) 5 (f) 27350 (g) 100 (h) 7

<p>5. (a)</p> $\begin{array}{r} 345 \\ \times 11 \\ \hline 345 \\ + 345 \\ \hline 3795 \end{array}$	<p>(b)</p> $\begin{array}{r} 783 \\ \times 23 \\ \hline 2349 \\ + 1566 \\ \hline 18009 \end{array}$	<p>(c)</p> $\begin{array}{r} 609 \\ \times 15 \\ \hline 3045 \\ + 609 \\ \hline 9135 \end{array}$
---	---	---

(d) $\begin{array}{r} 216 \\ \times 47 \\ \hline 1512 \\ +864 \\ \hline 10152 \end{array}$	(e) $\begin{array}{r} 49 \\ \times 38 \\ \hline 392 \\ +147 \\ \hline 1862 \end{array}$	(f) $\begin{array}{r} 804 \\ \times 10 \\ \hline 000 \\ +804 \\ \hline 8040 \end{array}$
(g) $\begin{array}{r} 72 \\ \times 54 \\ \hline 288 \\ +360 \\ \hline 3888 \end{array}$	(h) $\begin{array}{r} 100 \\ \times 56 \\ \hline 600 \\ +500 \\ \hline 5600 \end{array}$	(i) $\begin{array}{r} 839 \\ \times 10 \\ \hline 000 \\ +839 \\ \hline 8390 \end{array}$
(j) $\begin{array}{r} 572 \\ \times 29 \\ \hline 5148 \\ +1144 \\ \hline 16588 \end{array}$	(k) $\begin{array}{r} 265 \\ \times 11 \\ \hline 265 \\ +265 \\ \hline 2915 \end{array}$	(l) $\begin{array}{r} 391 \\ \times 64 \\ \hline 1564 \\ +2346 \\ \hline 25024 \end{array}$

Learning Target 4.3

1. A shelf holds cups Number of such shelves	$\begin{array}{r} \text{Th H T O} \\ = 58 \\ = \times 18 \\ \hline 464 \\ +58 \\ \hline 1044 \end{array}$
Total number of cups in such left	$= \underline{1044}$
2. Book contains pages Bookseller bought copies of book	$\begin{array}{r} \text{Th H T O} \\ = 259 \\ = \times 34 \\ \hline 1036 \\ +777 \\ \hline 8806 \end{array}$
Total number of pages	$= \underline{8806}$
3. Each page contain wards Book has pages	$\begin{array}{r} \text{Th H T O} \\ = 270 \\ = \times 43 \\ \hline 810 \\ +1080 \\ \hline 11610 \end{array}$
Total number of words	$= \underline{11610}$

	Th H T O
4. Apple needed to make a pic	= 1 0
Apple needed to make 12 pic	= $\begin{array}{r} \times 12 \\ 20 \\ + 10 \\ \hline 120 \end{array}$
Total apple needed	= $\underline{120}$
Th H T O	
5. Rahul delivers newspaper every morning	= 1 6 7
Newspaper delivered in 41 days	= $\begin{array}{r} \times 41 \\ 167 \\ + 668 \\ \hline 6847 \end{array}$
Total number of newspaper delivered	= $\underline{6847}$
Th H T O	
6. Number of students in a section	4 8
Number of section	= $\begin{array}{r} \times 14 \\ 192 \\ + 48 \\ \hline 672 \end{array}$
Total number of students in all section	= $\underline{672}$
Th H T O	
7. Cost of one book	= 9 7
Cost of 43 such books	= $\begin{array}{r} \times 43 \\ 291 \\ + 388 \\ \hline 4171 \end{array}$
Cost of total books	= $\underline{4171}$
Th H T O	
8. Car travels in one hour	= 6 5
Car travels in 72 hour	= $\begin{array}{r} \times 72 \\ 130 \\ + 455 \\ \hline 4680 \end{array}$
Total distance travelled	= $\underline{4680}$
Th H T O	
9. Number of racks in library	= 1 6 8
Each rack contains book	= $\begin{array}{r} \times 19 \\ 1512 \\ + 168 \\ \hline 3192 \end{array}$
Total number of books in library	= $\underline{3192}$

Learning Target 4.4

1. Fish in each tank at the aquarium	=	3 5 6
Number of tank	=	$\begin{array}{r} \times 4 5 \\ 1 7 8 0 \end{array}$
Total number of fish	=	$\begin{array}{r} + 1 4 2 4 \\ \hline 1 6 0 2 0 \end{array}$
2. School lunch sold on monday	=	3 4 0
Each lunch cost	=	$\begin{array}{r} \times 2 5 \\ 1 7 0 0 \\ + 6 8 0 \\ \hline 8 5 0 0 \end{array}$
Total money spent	=	$\begin{array}{r} \times 7 5 \\ 8 2 5 \\ + 1 1 5 5 \\ \hline 1 2 3 7 5 \end{array}$
3. Carton holds books	=	1 6 5
Books in 75 such carton	=	$\begin{array}{r} \times 7 5 \\ 8 2 5 \\ + 1 1 5 5 \\ \hline 1 2 3 7 5 \end{array}$
Total number of books	=	$\begin{array}{r} 2 0 1 8 \\ \times 9 \\ \hline 1 8 1 6 2 \end{array}$
4. A factory produces toys in a day	=	2 0 1 8
Toys produced in a days	=	$\begin{array}{r} \times 9 \\ 1 8 1 6 2 \end{array}$
Total number of toys produced	=	$\begin{array}{r} 1 2 5 \\ \times 9 \\ \hline 1 1 2 5 \end{array}$
5. Movie ticket costs	=	1 2 5
Cost of 9 tickets	=	$\begin{array}{r} \times 9 \\ 1 1 2 5 \end{array}$
Total cost of all tickets	=	$\begin{array}{r} 1 1 2 5 \end{array}$

Catch The Concept

- | | | | |
|----------------------|---------------------|---------------------|----------------|
| 1. Repeated addition | 2. Product | 3. 0 | 4. Same number |
| 5. Same | 6. 270 | 7. 4800 | 8. 245000 |
| 9. 12000 | 10. 16800 | 11. 23×100 | 12. 35,500 |
| 13. 27×1000 | 14. 63×100 | 15. 12×100 | |

Apply Your Mind!

- Number of edges for 12 dice = $12 \times 12 = 144$
- Dogs and cats have 4 legs
Number of legs of 16 dog and 29 cats = $16 \times 4 + 29 \times 4$
 $= 64 + 116 = 180$
- $\square + 32 = 86 \Rightarrow \square = 86 - 32 \Rightarrow \square = 54$
 $\Delta = 4 \times \square, \Delta = 4 \times 54, \Delta = 216$



5.

Division

Task-1

1. $6 \overline{) 72}$ (12)

$$\begin{array}{r} -6\downarrow \\ \underline{12} \\ -12 \\ \underline{0} \end{array}$$

Quotient = 12

2. $13 \overline{) 78}$ (6)

$$\begin{array}{r} -13 \\ \underline{78} \\ 0 \end{array}$$

Quotient = 6

3. $3 \overline{) 45}$ (15)

$$\begin{array}{r} -3\downarrow \\ \underline{15} \\ -15 \\ \underline{0} \end{array}$$

Quotient = 15

4. $8 \overline{) 8}$ (1)

$$\begin{array}{r} -8 \\ \underline{0} \end{array}$$

5. $6 \overline{) 18}$ (3)

$$\begin{array}{r} -6 \\ \underline{18} \\ 0 \end{array}$$

6. $7 \overline{) 21}$ (3)

$$\begin{array}{r} -7 \\ \underline{21} \\ 0 \end{array}$$

7. $7 \overline{) 77}$ (11)

$$\begin{array}{r} -7\downarrow \\ \underline{07} \\ -7 \\ \underline{0} \end{array}$$

Quotient = 11

8. $14 \overline{) 182}$ (13)

$$\begin{array}{r} -14\downarrow \\ \underline{42} \\ -42 \\ \underline{0} \end{array}$$

Quotient = 13

9. $2 \overline{) 18}$ (9)

$$\begin{array}{r} -2 \\ \underline{18} \\ 0 \end{array}$$

Quotient = 9

10. $7 \overline{) 28}$ (4)

$$\begin{array}{r} -7 \\ \underline{28} \\ 0 \end{array}$$

Quotient = 4

11. $5 \overline{) 55}$ (11)

$$\begin{array}{r} -5\downarrow \\ \underline{05} \\ -5 \\ \underline{0} \end{array}$$

Quotient = 11

12. $10 \overline{) 140}$ (14)

$$\begin{array}{r} -10\downarrow \\ \underline{40} \\ -40 \\ \underline{0} \end{array}$$

Quotient = 14

13. $5 \overline{) 70}$ (14)

$$\begin{array}{r} -5\downarrow \\ \underline{20} \\ -20 \\ \underline{0} \end{array}$$

Quotient = 14

14. $3 \overline{) 42}$ (14)

$$\begin{array}{r} -3\downarrow \\ \underline{12} \\ -12 \\ \underline{0} \end{array}$$

Quotient = 14

15. $5 \overline{) 35}$ (7)

$$\begin{array}{r} -5 \\ \underline{35} \\ 0 \end{array}$$

Quotient = 7

16. $14 \overline{) 28}$ (2)

$$\begin{array}{r} -14 \\ \underline{28} \\ 0 \end{array}$$

Quotient = 2

Learning through puzzle

72	÷	9	=	8	84	÷	12	=	7
÷				÷	÷				÷
4	÷	1	=	4	7	÷	1	=	7
=				=	=				=
18		24	÷	2	=	12			1

Task-2

Do yourself

Learning Target 5.1

- (a) $0 \Rightarrow$ When zero is divided by any number, we get zero as the quotient.

(b) $1 \Rightarrow$ If we divide any number by the same number, we get 1 as the quotient.

(c) $73 \Rightarrow$ If we divide any number by 1, we get same number as the quotient.

(d) $1 \Rightarrow$ If we divide any number by the same number, we get 1 as the quotient.

(e) $0 \Rightarrow$ When zero is divided by any number, we get zero as the quotient.

(f) $1 \Rightarrow$ If we divide any number by the same number, we get 1 as the quotient.

(g) $3762 \Rightarrow$ If we divide any number by 1, we get same number as the quotient.

(h) $0 \Rightarrow$ When zero is divided by any number, we get zero as the quotient.
- (a) **Quotient** = 3 **Remainder** = 4

(b) **Quotient** = 72 **Remainder** = 6

(c) **Quotient** = 5 **Remainder** = 36

(d) **Quotient** = 873 **Remainder** = 4

(e) **Quotient** = 68 **Remainder** = 95

(f) **Quotient** = 9 **Remainder** = 642

(g) **Quotient** = 67 **Remainder** = 40
- (b) Dividend = (Quotient \times Divisor) + Remainder

$$2749 = (458 \times 6) + 1$$
$$2749 = 2748 + 1$$
$$2749 = 2749$$

Hence answer is correct.

$$\begin{aligned}
 \text{(c) Dividend} &= (\text{Quotient} \times \text{Divisor}) + \text{Remainder} \\
 807 &= (269 \times 3) + 0 \\
 807 &= 807 + 0 \\
 807 &= 807
 \end{aligned}$$

Hence answer is correct.

$$\begin{aligned}
 \text{(d) Dividend} &= (\text{Quotient} \times \text{Divisor}) \\
 506 &= (126 \times 4) + 2 \\
 506 &= 504 + 2 \\
 506 &= 506
 \end{aligned}$$

Hence answer is correct.

$$\begin{aligned}
 \text{(e) Dividend} &= (\text{Quotient} \times \text{Divisor}) + \text{Remainder} \\
 426 &= (53 \times 8) + 4 \\
 426 &= 424 + 4 \\
 426 &= 428
 \end{aligned}$$

Hence answer is Incorrect.

4. (a) 7) 861 (123) (b) 5) 735 (147) (c) 6) 948 (158)

$$\begin{array}{r}
 \begin{array}{r}
 -7\downarrow \\
 16 \\
 -14\downarrow \\
 \hline
 21 \\
 -21 \\
 \hline
 0
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{r}
 -5\downarrow \\
 23 \\
 -20\downarrow \\
 \hline
 35 \\
 -35 \\
 \hline
 0
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \begin{array}{r}
 -6\downarrow \\
 34 \\
 -30\downarrow \\
 \hline
 48 \\
 -48 \\
 \hline
 0
 \end{array}
 \end{array}$$

(d) 3) 894 (298)

$$\begin{array}{r}
 \begin{array}{r}
 -6\downarrow \\
 29 \\
 -27\downarrow \\
 \hline
 24 \\
 -24 \\
 \hline
 0
 \end{array}
 \end{array}$$

(e) 4) 876 (219)

$$\begin{array}{r}
 \begin{array}{r}
 -8\downarrow \\
 7 \\
 -4\downarrow \\
 \hline
 36 \\
 -36 \\
 \hline
 0
 \end{array}
 \end{array}$$

(f) 9) 918 (102)

$$\begin{array}{r}
 \begin{array}{r}
 -9\downarrow\downarrow \\
 18 \\
 -18 \\
 \hline
 0
 \end{array}
 \end{array}$$

(g) 2) 794 (397)

$$\begin{array}{r}
 \begin{array}{r}
 -6 \\
 19 \\
 -18 \\
 \hline
 14 \\
 -14 \\
 \hline
 0
 \end{array}
 \end{array}$$

(h) 5) 645 (129)

$$\begin{array}{r}
 \begin{array}{r}
 -5\downarrow \\
 14 \\
 -10\downarrow \\
 \hline
 45 \\
 -45 \\
 \hline
 0
 \end{array}
 \end{array}$$

(i) 5) 415 (83)

$$\begin{array}{r}
 \begin{array}{r}
 -40\downarrow \\
 15 \\
 -15 \\
 \hline
 0
 \end{array}
 \end{array}$$

$$(k) 4 \overline{) 464} (116$$

$$\begin{array}{r} \underline{-4\downarrow} \\ 6 \\ \underline{-4\downarrow} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

$$(l) 2 \overline{) 510} (255$$

$$\begin{array}{r} \underline{-4\downarrow} \\ 11 \\ \underline{-10\downarrow} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

Learning though puzzle

Divisor is 9.

In	Out
45	$45 \div 9 = 5$
$7 \times 9 = 63$	7
36	$36 \div 9 = 4$
$10 \times 9 = 90$	10

Learning Target 5.2

- Shopkeeper has to pack glasses = 84
Number of boxes = 7
Number of glasses pack in each box = 7) 84)12
= 12
$$\begin{array}{r} \underline{-7\downarrow} \\ 14 \\ \underline{0} \end{array}$$
- Number of Players = 39
Players divided into teams = 5
Number of players in each team = 5) 39 (7
= 7
$$\begin{array}{r} \underline{-35} \\ 4 \end{array}$$

Player left = 4
- Number of wheels = 16
Bicycle have number of wheels = 2
Total Bicycles count = 2) 16 (8
= 8
$$\begin{array}{r} \underline{-16} \\ 0 \end{array}$$
- Number of wheels = 27
Auto-rickshaw have number of wheels = 3
Total auto-rickshaw count = 3) 27 (9
= 9
$$\begin{array}{r} \underline{-27} \\ 0 \end{array}$$
- Number of legs = 20
Cows has number of legs = 4

Total number of cows count	= 4) 20 (5
= 5	$\begin{array}{r} -20 \\ \hline 0 \end{array}$
6. Total number of chocolates	= 32
Each box contain chocolotes	= 8
Number of boxes	= 8) 32 (4
= 4	$\begin{array}{r} -32 \\ \hline 0 \end{array}$
7. Total number of people	= 40
Each packet comes for people	= 5
Packet required	= 5) 40 (8
= 8	$\begin{array}{r} -40 \\ \hline 0 \end{array}$
8. Pinki bring muffins	= 480
Each basket contain muffins	= 8
Basket she brought	= 8) 480 (60
= 60	$\begin{array}{r} 48\downarrow \\ \hline 00 \end{array}$
9. Lengh of a rope	= 180
Rope divided among students	= 10
Each student get rope	= 10) 180 (18
= 18	$\begin{array}{r} -10 \\ \hline 80 \\ -80 \\ \hline 0 \end{array}$

Learning through puzzle

- | | |
|-------------------------|-------------------------|
| 1. Dividend = 49 | 2. Dividend = 88 |
| Remainder = 1 | Remainder = 4 |
| 3. Dividend = 92 | 4. Dividend = 51 |
| Remainder = 2 | Remainder = 1 |

Learning Target 5.3

1. Shopkeeper sells shirt in a week	= 917
Shopkeeper sell shirt in one day	= 7) 917 (131
= 131 shirt	$\begin{array}{r} -7\downarrow \\ \hline 21 \\ -21\downarrow \\ \hline 7 \\ -7 \\ \hline 0 \end{array}$

2. Total price of books	= ₹ 220
Number of books	= 11
Price of each book	= 11) 220 (20
= 20	$\begin{array}{r} -22\downarrow \\ \hline 00 \end{array}$
3. Lakshmi draws picture	= 832
Picture on each page	= 8
Page needed to draw all pictures	= 8) 832 (104
= 104	$\begin{array}{r} -8\downarrow\downarrow \\ \hline 32 \\ -32 \\ \hline 0 \end{array}$
4. Total money	= 180
Biscuit costs	= 15
Number of packets purchased	= 15) 180 (12
= 12	$\begin{array}{r} -15\downarrow \\ \hline 30 \\ -30 \\ \hline 0 \end{array}$
5. Number of books in library by various author	= 1728
Number of authors	= 12
Number of books	= 12) 1728 (144
= 144	$\begin{array}{r} -12\downarrow \\ \hline 52 \\ -48\downarrow \\ \hline 48 \\ -48 \\ \hline 0 \end{array}$

Catch The Concept

- | | | |
|------------------|--------------|---------------------------|
| 1. Division | 2. Highest | 3. Quotient and remainder |
| 4. Quotient | 5. 1 | 6. Zero |
| 7. Dividend | 8. 2, 45 | 9. 3, 26 |
| 10. 1 | 11. 0 | 12. 8 |
| 13. not possible | 14. Dividend | 15. 10 |

Apply Your Mind!

- $(36 \div 4) \times 4 = 9 \times 4 = 36$
- $52 \div 4$

3. Total cookies in a box = 21
 Children eat equal number of cookies

$$= 3$$

$$= 3) 21 \begin{array}{r} 7 \\ - 21 \\ \hline 0 \end{array}$$

Share of cookies eaten by each child
 = 7

4. 4 tens = 40
 Hence $\frac{400 - 40}{9} = \frac{360}{9} = 40$
5. Product of $14 \times 15 = 210$
 Number of 5's = $\frac{210}{5} = 42$

□

6. Fractions

Task-1

Fig 1, 3, 6 are divided into 2 equal parts.

Task-2

- | | | |
|-----------------------------------|-----|---------------------------|
| 1. Total shaded portion | = 5 | |
| Total number of portion | = 5 | $\Rightarrow \frac{5}{5}$ |
| 2. Total number of shaded portion | = 6 | |
| Total number of portion | = 8 | $\Rightarrow \frac{6}{8}$ |
| 3. Total shaded portion | = 2 | |
| Total number of portion | = 4 | $\Rightarrow \frac{2}{4}$ |
| 4. Total shaded portion | = 7 | |
| Total number of portion | = 8 | $\Rightarrow \frac{7}{8}$ |
| 5. Total shaded portion | = 1 | |
| Total number of portion | = 2 | $\Rightarrow \frac{1}{2}$ |
| 6. Total shaded portion | = 3 | |
| Total number of portion | = 3 | $\Rightarrow \frac{3}{3}$ |

7. Total shaded portion = 1
 Total number of portion = 3 $\Rightarrow \frac{1}{3}$
8. Total shaded portion = 3
 Total number of portion = 4 $\Rightarrow \frac{3}{4}$
9. Total shaded number of portion = 3
 Total number of portion = 5 $\Rightarrow \frac{3}{5}$
10. Total shaded portion = 2
 Total number of portion = 3 $\Rightarrow \frac{2}{3}$
11. Total shaded portion = 1
 Total number of portion = 5 $\Rightarrow \frac{1}{5}$
12. Total shaded portion = 7
 Total number of portion = 8 $\Rightarrow \frac{7}{8}$

Task-3

Do Yourself

Task-4

Do Yourself

1. $\frac{3}{12} = \frac{1}{4}$ 2. $\frac{2}{3} = \frac{8}{12}$ 3. $\frac{9}{12} = \frac{3}{4}$
4. $\frac{6}{12} = \frac{1}{2}$

Learning Target 6.1

1. (a) $\frac{7}{9}$ (b) $\frac{4}{8}$ (c) $\frac{6}{7}$ (d) $\frac{5}{12}$
2. (a) One-fourth (b) Half (c) Three-fourth
 (d) Four-fifth (e) Eleven-fifths (f) Three-fifth
3. (b) $\frac{1}{2}$ of 24 = $\frac{1}{2} \times 24 = \frac{24}{2} = 12$
 (c) $\frac{1}{2}$ of 30 = $\frac{1}{2} \times 30 = \frac{30}{2} = 15$
 (d) $\frac{1}{12}$ of 72 = $\frac{1}{12} \times 72 = \frac{72}{12} = 6$

$$(e) \frac{1}{3} \text{ of } 45 = \frac{1}{3} \times 45 = \frac{45}{3} = 15$$

$$(f) \frac{1}{4} \text{ of } 54 = \frac{1}{3} \times 54 = \frac{54}{3} = 18$$

$$(g) \frac{1}{4} \text{ of } = \frac{1}{4} \times 48 = \frac{48}{4} = 12$$

$$(h) \frac{1}{2} \text{ of } 38 = \frac{1}{2} \times 38 = \frac{38}{2} = 19$$

$$(i) \frac{1}{5} \text{ of } 55 = \frac{1}{5} \times 55 = \frac{55}{5} = 11$$

$$(j) \frac{1}{8} \text{ of } 56 = \frac{1}{8} \times 56 = \frac{56}{8} = 7$$

$$\begin{aligned} 4. \text{ Total number of colour pencils} &= 30 \\ \text{Number of blue pencils} &= 30 \times \frac{3}{5} \\ &= \frac{90}{5} = 18 \end{aligned}$$

$$\begin{aligned} 5. \text{ Number of flowers} &= 24 \\ \text{Number of roses flowers} &= \frac{5}{6} \times 24 = \frac{120}{6} = 20 \end{aligned}$$

$$\begin{aligned} 6. \text{ Total number of mangoes} &= 49 \\ \text{People ate mangoes} &= \frac{3}{7} \times 49 = \frac{147}{7} = 21 \end{aligned}$$

$$\begin{aligned} 7. \text{ Total number of oranges} &= 36 \\ \text{People ate oranges} &= \frac{2}{3} \times 36 = \frac{72}{3} = 24 \end{aligned}$$

Learning Target 6.2

1. Multiply by $\frac{2}{2}$, $\frac{3}{3}$, $\frac{4}{4}$, $\frac{5}{5}$

$$(a) \frac{2}{5} \times \frac{2}{2} = \frac{4}{10}, \frac{2}{5} \times \frac{3}{3} = \frac{6}{15}, \frac{2}{5} \times \frac{4}{4} = \frac{8}{20}, \frac{2}{5} \times \frac{5}{5} = \frac{10}{25}$$

$$(b) \frac{1}{2} \times \frac{2}{2} = \frac{2}{4}, \frac{1}{2} \times \frac{3}{3} = \frac{3}{6}, \frac{1}{2} \times \frac{4}{4} = \frac{4}{8}, \frac{1}{2} \times \frac{5}{5} = \frac{5}{10}$$

$$(c) \frac{1}{3} \times \frac{2}{2} = \frac{2}{6}, \frac{1}{3} \times \frac{3}{3} = \frac{3}{9}, \frac{1}{3} \times \frac{4}{4} = \frac{4}{12}, \frac{1}{3} \times \frac{5}{5} = \frac{5}{15}$$

$$(d) \frac{6}{11} \times \frac{2}{2} = \frac{12}{22}, \frac{6}{11} \times \frac{3}{3} = \frac{18}{33}, \frac{6}{11} \times \frac{4}{4} = \frac{24}{44}, \frac{6}{11} \times \frac{5}{5} = \frac{30}{55}$$

Learning through puzzle

$$\frac{1}{21} + \frac{1}{21} + \frac{1}{21} = \frac{1}{7} \Rightarrow \frac{3}{21} = \frac{1}{7} \Rightarrow \frac{1}{7} = \frac{1}{7}$$

Hence answer = 21

2. (a) $\frac{4}{8}, \frac{2}{4} \Rightarrow \frac{1}{2} = \frac{1}{2}$ (b) $\frac{1}{3}, \frac{4}{8} \Rightarrow \frac{1}{3} < \frac{1}{2}$
 (c) $\frac{1}{2}, \frac{5}{10} \Rightarrow \frac{1}{2} = \frac{1}{2}$ (d) $\frac{2}{12}, \frac{1}{6} \Rightarrow \frac{1}{6} = \frac{1}{6}$
 (e) $\frac{3}{4}, \frac{1}{3} \Rightarrow \frac{3}{4} > \frac{1}{3}$ (f) $\frac{2}{4}, \frac{4}{10} \Rightarrow \frac{1}{2} > \frac{2}{5}$
3. (a) $\frac{1}{4} < \frac{3}{4}$ Denominator is same, so highest numerator is the highest fraction.
 (b) $\frac{3}{9} > \frac{1}{9}$ (c) $\frac{2}{15} = \frac{2}{15}$ (d) $\frac{5}{6} > \frac{1}{6}$
 (e) $\frac{1}{4} > \frac{1}{6}$ Numerator is same, so lowest denominator is the highest fraction.
 (f) $\frac{1}{4} < \frac{1}{2}$ (g) $\frac{4}{6} > \frac{4}{8}$ (h) $\frac{2}{6} < \frac{2}{5}$
 (i) $\frac{1}{6} < \frac{2}{6}$ (j) $\frac{3}{4} > \frac{2}{4}$ (k) $\frac{4}{6} > \frac{1}{6}$
 (l) $\frac{1}{3} = \frac{1}{3}$

4. (a) Ascending order $= \frac{2}{7} < \frac{3}{7} < \frac{5}{7} < \frac{6}{7}$
 Descending order $= \frac{6}{7} > \frac{5}{7} > \frac{3}{7} > \frac{2}{7}$
 (b) Ascending order $= \frac{2}{8} < \frac{3}{8} < \frac{4}{8} < \frac{7}{8}$
 Descending order $= \frac{7}{8} > \frac{4}{8} > \frac{3}{8} > \frac{2}{8}$
 (c) Ascending order $= \frac{2}{5} < \frac{3}{5} < \frac{4}{5} < \frac{7}{5}$
 Descending order $= \frac{7}{5} > \frac{4}{5} > \frac{3}{5} > \frac{2}{5}$
 (d) Ascending order $= \frac{3}{9} < \frac{4}{9} < \frac{7}{9} < \frac{8}{9}$
 Descending order $= \frac{8}{9} > \frac{7}{9} > \frac{4}{9} > \frac{3}{9}$

Learning through puzzle

Do it yourself

Task-6

1. (a) $\frac{1}{3} + \frac{1}{3} = \frac{1+1}{3} = \frac{2}{3}$ (b) $\frac{1}{6} + \frac{2}{6} = \frac{1+2}{6} = \frac{3}{6}$
(c) $\frac{4}{12} + \frac{4}{12} = \frac{4+4}{12} = \frac{8}{12}$
2. (a) $\frac{5}{9} - \frac{2}{9} = \frac{5-2}{9} = \frac{3}{9}$ (b) $\frac{3}{4} - \frac{2}{4} = \frac{3-2}{4} = \frac{1}{4}$
(c) $\frac{7}{10} - \frac{4}{10} = \frac{7-4}{10} = \frac{3}{10}$

Just 4 fun

$$\begin{aligned} \text{Shaded Portion} &= 7 \\ \text{Total number of portion} &= 21 \Rightarrow \frac{7}{21} = \frac{1}{3} \end{aligned}$$

Learning Target 6.3

1. (a) $\frac{5}{12} + \frac{1}{12} = \frac{5+1}{12} = \frac{6}{12}$ (b) $\frac{5}{17} + \frac{4}{17} = \frac{5+4}{17} = \frac{9}{17}$
(c) $\frac{3}{10} + \frac{1}{10} = \frac{3+1}{10} = \frac{4}{10}$ (d) $\frac{7}{13} + \frac{1}{13} = \frac{7+1}{13} = \frac{8}{13}$
(e) $\frac{13}{19} + \frac{6}{19} = \frac{13+6}{19} = \frac{19}{19}$ (f) $\frac{5}{9} - \frac{4}{9} = \frac{5-4}{9} = \frac{1}{9}$
2. (a) $\frac{8}{13} - \frac{4}{13} = \frac{8-4}{13} = \frac{4}{13}$ (b) $\frac{21}{29} - \frac{2}{29} = \frac{21-2}{29} = \frac{19}{29}$
(c) $\frac{6}{10} - \frac{1}{10} = \frac{6-1}{10} = \frac{5}{10}$ (d) $\frac{12}{13} - \frac{4}{13} = \frac{12-4}{13} = \frac{8}{13}$
(f) $\frac{5}{9} - \frac{4}{9} = \frac{5-4}{9} = \frac{1}{9}$
3. (a) Total number of oranges $= \frac{7}{11}$
Suman ate $= \frac{3}{11}$
Number of oranges left $= \frac{7}{11} - \frac{3}{11} = \frac{4}{11}$

(b) Arun read book in morning	$= \frac{5}{8}$
Arun read book in evening	$= \frac{3}{8}$
Total book read	$= \frac{5}{8} + \frac{3}{8} = \frac{8}{8} = 1$
(c) Total cake	$= 1$
She gave to her friend	$= \frac{3}{5}$
Total cake left	$= \frac{1-3}{1\ 5} \Rightarrow \frac{5-3}{5} = \frac{2}{5}$
(d) Raju bought tomatoes	$= \frac{3}{4}$ kg
Raju bought potatoes	$= \frac{1}{4}$ kg
Total weight of vegetables	$= \frac{3}{4} + \frac{1}{4} = \frac{3+1}{4} = \frac{4}{4} = 1$ kg

Catch The Concept

- | | | |
|-------------------|------------------|--|
| 1. Like fractions | 2. Greatest | 3. Smallest |
| 4. Equivalent | 5. Smallest | 6. Greatest |
| 7. 4 and 5 | 8. Five-sevenths | 9. $\frac{8}{9} > \frac{7}{9} > \frac{5}{9} > \frac{3}{9}$ |
10. $\frac{3}{9} < \frac{5}{9} < \frac{6}{9} < \frac{7}{9}$

Apply Your Minds

- | | |
|---|-------------------------------|
| 1. Total number of match sticks | = 40 |
| Sonia uses 3 match sticks everyday | |
| Sonia uses match sticks in 7 day | = $3 \times 7 = 21$ |
| Fraction of match sticks used | $= \frac{21}{40}$ |
| 2. Total number of portion | = 8 |
| Number of unshaded portion | = 4 |
| Unshaded fraction | $= \frac{4}{8} = \frac{1}{2}$ |
| 3. Product of numerator and denominator | = 35 |
| Numerator = 5 or 7, | denominator = 5 or 7 |

But numerator and denominator respectively are consecutive odd numbers.

So numerator = 5,

denominator = 7

So fraction

$$= \frac{5}{7}$$



7. Measurement of Length

Task-1

Do it yourself

Task-2

- 10 cm
- $8 \text{ cm} - 3 \text{ cm} = 5 \text{ cm}$ \therefore Bar starts 3 cm onwards.
- $11 \text{ cm} - 2 \text{ cm} = 9 \text{ cm}$ \therefore Bar starts 2 cm onwards.
- $13 \text{ cm} - 2 \text{ cm} = 11 \text{ cm}$ \therefore Bar starts 2 cm onwards.
- $9 \text{ cm} - 3 \text{ cm} = 6 \text{ cm}$ \therefore Bar starts 3 cm onwards.
- $14 \text{ cm} - 3 \text{ cm} = 11 \text{ cm}$ \therefore Bar starts 3 cm onwards.
- $14 \text{ cm} - 1 \text{ cm} = 13 \text{ cm}$ \therefore Bar starts 1 cm onwards.
- $8 \text{ cm} - 1 \text{ cm} = 7 \text{ cm}$ \therefore Bar starts 1 cm onwards.
- $15 \text{ cm} - 8 \text{ cm} = 7 \text{ cm}$ \therefore Bar starts 8 cm onwards.
- $15 \text{ cm} - 1 \text{ cm} = 14 \text{ cm}$ \therefore Bar starts 1 cm onwards.

Learning Target 7.1

- | | |
|--|---|
| (b) $1 \text{ m} = 1000 \text{ mm}$ | (c) $1 \text{ m} = 100 \text{ cm}$ |
| $32 \text{ m} = 32 \times 1000 \text{ mm}$ | $4 \text{ m } 19 \text{ cm} = 4 \times 100 + 19 \text{ cm}$ |
| $= 32000 \text{ mm}$ | $= 400 + 19 \text{ cm} = 419 \text{ cm}$ |
- | | |
|---|--|
| (d) $1 \text{ m} = 1000 \text{ mm}$ | (e) $1 \text{ km} = 1000 \text{ m}$ |
| $12 \text{ m } 5 \text{ mm} = 12 \times 1000 + 5$ | $32 \text{ km} = 32 \times 1000 \text{ m}$ |
| $= 12000 + 5$ | $= 32000 \text{ m}$ |
| $= 12005$ | |
- | |
|---|
| (f) $1000 \text{ m} = 1 \text{ km}$ |
| $4019 \text{ m} = 4 \times 1000 + 19 \text{ m}$ |
| $= 4 \text{ km} + 19 \text{ m}$ |

$$\begin{array}{r}
 \text{2. (a) km} \quad \text{m} \\
 336 \quad 553 \\
 + 351 \quad 325 \\
 \hline
 687 \text{ km } 878 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(b) km} \quad \text{m} \\
 176 \quad 585 \\
 + 221 \quad 300 \\
 \hline
 397 \text{ km } 885 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(c) km} \quad \text{m} \\
 285 \quad 406 \\
 + 393 \quad 632 \\
 \hline
 679 \text{ km } 038 \text{ m}
 \end{array}$$

$\therefore 1000 \text{ m} = 1 \text{ km}$
 So $406 + 632 \text{ m} = 1038 \text{ m}$
 \therefore we take 1000 or 1 km to left

$$\begin{array}{r}
 \text{(d) km} \quad \text{m} \\
 235 \quad 44 \\
 + 142 \quad 32 \\
 \hline
 377 \text{ km } 76 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(e) km} \quad \text{m} \\
 867 \quad 36 \\
 + 191 \quad 42 \\
 \hline
 1058 \text{ km } 78 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(f) km} \quad \text{m} \\
 695 \quad 56 \\
 + 333 \quad 21 \\
 \hline
 1028 \text{ km } 77 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(g) km} \quad \text{m} \\
 325 \quad 6 \\
 + 244 \quad 3 \\
 \hline
 569 \text{ km } 9 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(h) km} \quad \text{m} \\
 207 \quad 4 \\
 + 193 \quad 4 \\
 \hline
 400 \text{ km } 8 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(i) km} \quad \text{m} \\
 450 \quad 7 \\
 + 132 \quad 2 \\
 \hline
 582 \text{ km } 9 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{3. (a) km} \quad \text{m} \\
 455 \quad 589 \\
 - 153 \quad 451 \\
 \hline
 302 \text{ km } 138 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(b) km} \quad \text{m} \\
 359 \quad 638 \\
 - 332 \quad 623 \\
 \hline
 27 \text{ km } 15 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(c) km} \quad \text{m} \\
 755 \quad 467 \\
 - 678 \quad 390 \\
 \hline
 077 \text{ km } 077 \text{ m}
 \end{array}$$

$6 < 9$ we take 1 ten from left
 $5 < 8$ we take 1 ten from left
 $4 < 7$ we take 1 ten from left

$$\begin{array}{r}
 \text{(d) km} \quad \text{m} \\
 237 \quad 56 \\
 - 134 \quad 33 \\
 \hline
 103 \text{ km } 23 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(e) km} \quad \text{m} \\
 634 \quad 93 \quad \therefore 3 < 6 \text{ so we} \\
 - 363 \quad 42 \quad \text{take 1 ten form left} \\
 \hline
 271 \text{ km } 51 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(f) km} \quad \text{m} \\
 874 \quad 768 \\
 - 672 \quad 115 \\
 \hline
 202 \text{ km } 653 \text{ m}
 \end{array}$$

$$\begin{array}{r}
 \text{(g) km} \quad \text{m} \\
 288 \quad 805 \\
 - 155 \quad 523 \\
 \hline
 133 \text{ km } 282 \text{ m}
 \end{array}$$

<p>(h) km m</p> $\begin{array}{r} 599 \\ - 287 \\ \hline 312 \end{array}$ <p>312 km 3 m</p>	<p>km m</p> $\begin{array}{r} 992 \\ - 461 \\ \hline 531 \end{array}$ <p>531 km 5 m</p>
---	---

Learning Target 7.2

- | | |
|---|--|
| <p>1. Suman had orange ribbon
Her mother bought blue ribbon
Total ribbon she have</p> | $\begin{array}{r} \text{m} \quad \text{cm} \\ = 18 \quad 7 \\ = + 17 \quad 29 \\ \hline = 35\text{m} \quad 36\text{m} \end{array}$ |
| <p>2. Santosh had rope
His friend gave him rope
Total rope</p> | $\begin{array}{r} \text{m} \quad \text{cm} \\ = 45 \quad 65 \\ = + 110 \quad 78 \\ \hline = 156\text{m} \quad 43\text{cm} \end{array}$ |
| <p>3. Sandhya had bought cloth
She cut into 5 equal parts.
Length of each part
= 7 m</p> | $\begin{array}{r} = 35\text{m} \\ = 5) 35 \quad (7 \\ \underline{-35} \\ 0 \end{array}$ |
| <p>4. Thanvi's sister toothbrush
Thanvi's toothbrush
Total difference
Hence thanvi's sister toothbrush is 2 cm more long than thanvi.</p> | $\begin{array}{r} = 16\text{cm} \\ = - 14\text{cm} \\ \hline = 2\text{cm} \end{array}$ |

Catch The Concept

- | | | | |
|----------|--------------|---------------|--------|
| 1. Meter | 2. Kilometer | 3. Centimeter | 4. 100 |
| 5. 1000 | 6. 100 | 7. 1000 | 8. 100 |
| 9. 1000 | 10. 1 | | |

Apply Your Mind!

1. 30 m = $30 \times 100 = 3000$ cm
 $3000 - 30 = 2970$ cm.
2. 25 m = 25×100 cm = 2500 cm
 $2\text{ m } 5\text{ cm} = 2 \times 100 + 5\text{ cm} = 205$ cm
 $250\text{ cm} = 250$ cm
Hence 2m 5 cm is the shortest length.
3. $275\text{ km} + 270\text{ km} + 285\text{ km}$
= 830 km



8. Measurement of Mass or Weight

Varun's mass = 50 kg.

Naman's mass = 50 - 4 = 46 kg.

Satya mass = 50 + 5 = 55 kg.

Total mass = 50 + 46 + 55 = 151 kg.

Task-1

- (a) Weight measure in grams = soap, paste, mustard seeds
(b) Weight measure in kilograms = Rice, wheat, sugar
- Do it yourself
- (a) 10 tomatoes (b) 4 bananas (c) 6 lemons

Task-2

- (b) 4 kg = 4×1000 gm = 4000 gm $\therefore 1$ kg = 1000 gm
(c) 8000 kg = $\frac{8000}{1000}$ gm = 8 kg $\therefore 1000$ gm = 1 kg.
(d) 10 kg = 10×1000 gm = 10000 g $\therefore 1$ kg = 1000 gm
(e) 7000 gm = $\frac{7000}{1000}$ = 7 kg $\therefore 1000$ gm = 1 kg.
(f) 5 kg = 5×1000 gm = 5000 gm $\therefore 1$ kg = 5000 gm
- (a) 2 kg 500 gm = $2 \times 1000 + 500 = 2000 + 500 = 2500$ gm
(b) 3 kg 50 gm = $3 \times 1000 + 50 = 3000 + 50 = 3050$ gm
(c) 4 kg 250 gm = $4 \times 1000 + 250$ gm = 4000 + 250 = 4250 gm
(d) 5 kg 100 g = $5 \times 1000 + 100$ g = 5000 + 100 g = 5100 g
- (a) 8 kg 50 g = $8 \times 1000 + 50$ g = 8000 + 50 g = 8050 g
(b) 3 kg 250 g = $3 \times 1000 + 250$ g = 3000 + 250 g = 3250 g
(c) 2 kg 4 g = $2 \times 1000 + 4$ g = 2000 + 4 g = 2004 g

Learning through puzzle

- (d) \square is 1 kg greater than Δ

Learning Target 8.1

$$\begin{array}{r} \text{1. (a) kg} \quad \text{g} \\ 37 \quad 148 \\ + 20 \quad 156 \\ \hline 57 \text{ kg } 304 \text{ g} \end{array}$$

$$\begin{array}{r} \text{(b) kg} \quad \text{g} \\ 24 \quad 447 \\ 46 \quad 157 \\ \hline 70 \text{ kg } 604 \text{ g} \end{array}$$

$$\begin{array}{r} \text{(c) kg} \quad \text{g} \\ 16 \quad 372 \\ + 73 \quad 435 \\ \hline 89 \text{ kg } 807 \text{ g} \end{array}$$

$$\begin{array}{r} \text{(d) kg} \quad \text{g} \\ 50 \quad 442 \\ + 22 \quad 336 \\ \hline 72 \text{ kg } 778 \text{ g} \end{array}$$

$$\begin{array}{r} \text{(e) kg} \quad \text{g} \\ 13 \quad 325 \\ + 44 \quad 135 \\ \hline 57 \text{ kg } 460 \text{ g} \end{array}$$

$$\begin{array}{r} \text{(f) kg} \quad \text{g} \\ 92 \quad 361 \\ + 04 \quad 550 \\ \hline 96 \text{ kg } 911 \text{ g} \end{array}$$

$$\begin{array}{r} \text{2. (a) kg} \quad \text{g} \\ 9 \quad 918 \\ - 5 \quad 350 \\ \hline 4 \text{ kg } 568 \text{ g} \end{array}$$

Hence $1 < 5$ So take 1 ten from left
So it becomes 11
 $9 - 1 = 8$

$$\begin{array}{r} \text{(b) kg} \quad \text{g} \\ 6 \quad 548 \\ - 4 \quad 334 \\ \hline 2 \text{ kg } 214 \text{ g} \end{array}$$

$$\begin{array}{r} \text{(c) kg} \quad \text{g} \\ 12 \quad 673 \\ - 6 \quad 195 \\ \hline 06 \text{ kg } 478 \text{ g} \end{array}$$

Hence $3 < 5$ So we take 1 tens from left
it becomes $13 - 5 = 8$
 $6 < 9$ So we take 1 tens from left
it becomes $16 - 9 = 7$
6 becomes 5 on left

$$\begin{array}{r} \text{(d) kg} \quad \text{g} \\ 7 \quad 945 \\ - 3 \quad 330 \\ \hline 4 \text{ kg } 615 \text{ g} \end{array}$$

$$\begin{array}{r} \text{(e) kg} \quad \text{g} \\ 17 \quad 348 \\ - 8 \quad 237 \\ \hline 9 \text{ kg } 111 \text{ g} \end{array}$$

$$\begin{array}{r} \text{(f) kg} \quad \text{g} \\ 29 \quad 874 \\ - 14 \quad 239 \\ \hline 15 \text{ kg } 635 \text{ g} \end{array}$$

Hence $4 < 9$ So we take 1 ten
from left it becomes 14

Learning Target 8.2

	kg	g
1. Teja bought sugar	= 8	600
Teja bought rice	= 6	400
Teja bought wheat	= + 3	500
Total weight	=	<u>18 kg 500 g</u>

	kg	g
2. Shopkeeper bought rice	= 85	000
He sold rice	= - 35	500
Rice left	=	<u>49 kg 500g</u>

	kg	g
3. Ravi bought potatoes	= 12	500
Ravi bought tomatoes	= 15	000
Ravi bought Onions	= + 7	500
Total vegetable bought	=	<u>35 kg 000g</u>

	kg	g
4. Total sack of potatoes	= 57	500
Sack of potatoes removed	= - 21	380
Total sack left	=	<u>36 120g</u>

	kg	g
5. A vendor had mangoes	= 80	500
Mangoes rotten	= - 15	500
Weight of good ones of mangoes	=	<u>65 kg 000g</u>

	kg	g
6. Hari bought red meat	10	500
Hari bought chicken meat	= 7	800
Hari bought fish meat	= + 5	800
Total meat hari bought	=	<u>24 kg 100g</u>

Catch The Concept

1. Gram 2. Kilogram 3. Gram 4. 1000
5. 1000 6. 1000 7. 1000

Apply Your Mind!

1. (a) Mass of take = 10 apples = 10 unit.
(b) Total mass of take and toy car = 10 + 10 = 20 unit.
2. $\square = 2$ apples, $\square = 2$ apples = 50 g so 1 apples = 25 gm
Total weight of apples = 25 g + 25 g + 25 g + 25 g + 25 g + 25 g = 150 gm

3. Type A weight = 50,000 kg.

Type B weight = 45,000 kg.

Type C weight is b/w Type A and Type B = $\frac{50,000 + 45,000}{2} = 47,500\text{kg}$



9. Measurement of Capacity

1. Do it yourself

2. (a) 2000 mL

(b) 1000 mL

Just 4 fun

Pooja has 15L of orange juice

Container C has 6L + container E has 4L + container F has 5L

= 6 L + 4L + 5 L = 15 L

Hence Answer is container C, E, F

Task-2

1. (b) 1 L = 1000 mL

(c) 1000 mL = 1 L

$$7\text{L} = 7 \times 1000 = 7000\text{mL}$$

$$6000\text{ mL} = \frac{6000}{1000} = 6\text{L}$$

(d) 1L = 1000 mL

(e) 1000 mL = 1 L

$$12\text{L} = 12 \times 1000 = 12000\text{mL} \quad 9000\text{ mL} = \frac{9000}{1000} = 9\text{L}$$

(f) 1 L = 1000 mL

$$8\text{L} = 8 \times 1000 = 8000\text{mL}$$

2. (a) 1L 500 mL = $1 \times 1000 + 500\text{mL} = 1000 + 500\text{mL} = 1500\text{mL}$

(b) 2L 300 mL = $2 \times 1000 + 300\text{mL} = 2000 + 300\text{mL} = 2300\text{mL}$

(c) 3L 250 mL = $3 \times 1000 + 250\text{mL} = 3000 + 250\text{mL} = 3250\text{mL}$

(d) 8L 500 mL = $8 \times 1000 + 500\text{mL} = 8000 + 500\text{mL} = 8500\text{mL}$

(e) 6L 150 mL = $6 \times 1000 + 150\text{mL} = 6000 + 150\text{mL} = 6150\text{mL}$

3. (a) 2L 500 mL = $2 \times 1000 + 500\text{mL} = 2000 + 500\text{mL} = 2500\text{mL}$

So (a) = (b).

(b) 2L 50 mL = $2 \times 1000 + 50\text{mL} = 2000 + 50\text{mL} = 2050\text{mL}$

So (b) = (a)

(c) 2L 5 mL = $2 \times 1000 + 5\text{mL} = 2000 + 5\text{mL} = 2005\text{mL}$

So (c) = (d)

(d) $2\text{L } 150\text{ mL} = 2 \times 1000 + 150\text{ mL} = 2000 + 150\text{ mL} = 2150\text{ mL}$

So (d) = (e)

(e) $2\text{L } 510\text{ mL} = 2 \times 1000 + 510\text{ mL} = 2000 + 510\text{ mL} = 2510\text{ mL}$

So (e) = (c)

Learning Target 9.1

(a) KL	L	(b) KL	L
	47		348
	+ 60		445
	107 KL		157
	604 L		602 L

(c) KL	L	(d) KL	L
	19		372
	+ 33		434
	52 KL		806 L

(e) KL	L	(f) KL	L
	43		385
	+ 34		035
	77 KL		420

2. (a) **KL** **L**

13	958
-12	850
1 KL	108 L

(c) KL	L
	32 693
	-26 193
	06 KL 500 L

(d) KL	L
	12 846
	-8 420
	4 KL 426 L

(f) KL	L
	59 674
	-34 538
	25 KL 136 L

(b) KL	L
	54 445
	+ 36 157
	90 KL 602 L

(d) KL	L
	90 446
	24 236
	114 KL 682 L

(f) KL	L
	82 261
	+ 03 590
	85 KL 851 L

(b) LK	L
	9 649
	- 3 634
	6 KL 015 L

$2 < 6$ So we take 1 ten from left
it becomes 12
 $3 - 1 = 2$ becomes left.

(e) KL	L	$\therefore 6 < 7$ So we take 1
	45 646	ten from left
	-23 437	it becomes 16
	22 KL 209 L	Left becomes $4 - 1 = 3$

$\therefore 4 < 8$ So we take 1 ten from left
it becomes 14
left becomes $7 - 1 = 6$

Learning through puzzle

Capacity of tub = capacity of 12 mugs (as shown)

1 bucket = 4 mugs

1 tub = 12 mugs

Hence capacity of tub = $\frac{12}{4}$ buckets = 3 buckets.

Learning Target 9.2

	L	mL
1. A shopkeeper sold Kerosene on Monday	= 89	500
He sold Kerosene on Tuesday	= + 92	750
Total Kerosene sold	<hr/>	
	182 L	250 mL

	L	mL
2. Ravi bought milk on first day	= 12	500
Ravi bought milk on second day	= 16	275
Ravi bought milk on third day	= + 23	100
Total milk bought	<hr/>	
	51 L	875 mL

	L	mL
3. Rohit need milk to prepare sweet	= 45	500
Milk man supply milk	= -4	750
Rohit has to buy milk from market	<hr/>	
	40 L	750 mL

	L	mL
4. Manoj fills cold water in a bucket	= 5	000
Manoj fills hot water in a bucket	= +8	500
Total volume of water in bucket	<hr/>	
	13 L	500 mL

Catch The Concept

1. Liters 2. Liter 3. 1000 4. 1000 5. 1000

Apply Your Mind!

	L	mL
1. Total water in jug	= 3	250
Water poured into glasses	= -0	950
Water left in jug	<hr/>	
	2 L	300 mL

2. 1 jug = 3 liter
Tub = 3 jug = 3 + 3 + 3 = 9 liter



10. 2D - 3D Shapes

Just 4 fun

Both shape of object is correct.

Learning through puzzle

Do it yourself.

Just 4 fun

No, it is not possible.

Learning through puzzle

Do it yourself.

Taks-1

- | | |
|----------------------------|------------------------|
| 1. (a) Cube, Ice Cube | (b) Cuboid, Brick |
| (c) Oval, Mirror | (d) Circle, Bangle |
| (e) Rectangle, Black board | (f) Square, Stamp |
| (g) Triangle, Sandwich | (h) Cyclinder, Battery |
| (i) Cone, Tent | |

Learning Target 10.1

- | | | |
|--------------|--------------|-------------|
| 1. Oval | 2. Rectangle | 3. Triangle |
| 4. Square | 5. Rectangle | 6. Circle |
| 7. Rectangle | 8. Square | 9. Triangle |

Task-2

1.	Cube	Cuboid	Cone	Cylinder	Sphere
(a) Faces	6	6	2	3	1
(b) Edges	12	12	1	2	0
(c) Corners	8	8	1	0	0
2. (a) (iv)	(b) (iii)	(c) (i)	(d)	(v) (e)	(ii)

Task-3

Do it yourself.

Catch The Concept

- | | | | |
|----------------------|-------------|---------|-------------------|
| 1. Point | 2. Position | 3. Line | 4. Both direction |
| 5. \leftrightarrow | 6. 2 | 7. 4 | 8. 3 |
| 9. No | 10. solid | 11. 6 | 12. 4 |
| 13. 12. | | | |

Apply Your Mind!

- (a) Number of vertical lines = 4
(b) Number of horizontal lines = 3
(c) Number of curved lines = 2
- 5.
- \triangle , \square



11. Time and Calendar

Task-1

- (b) 1 : 40, 1 hrs 40 min (c) 4 : 55, 4 hrs 55 min
(d) 9 : 20, 9 hrs 20 min (e) 7 : 25, 7 hrs 25 min
(f) 5 : 35, 5 hrs 35 min.
- Do it yourself

Learning through puzzle

(b)

Task-2

- (b) 10 min past 11 o'clock. (c) 10 min to 9 o'clock.
(d) 15 min past 7 o'clock
- Do yourself

Lerning through puzzle

Virat start drawing at 10 : 05 A.M.
She take 5 minute to draw a flower
She has to draw 8 flower
Total time taken $8 \times 5 = 40$ min
Hence Virat complete the drawing at 10 : 45 A.M.

Catch The Concept

- | | | |
|-----------------|----------------|-----------------|
| 1. 24 | 2. 60 | 3. 60 |
| 4. A.M. | 5. P.M. | 6. Hours hand |
| 7. Minute hand | 8. Second hand | 9. 10 : 00 A.M. |
| 10. 10 : 00 P.M | 11. 2 : 30 | 12. 2 : 45 |
| 13. 5 : 15 | 14. January | 15. December |
| 16. Tenth | 17. 30 | 18. March |
| 19. 30 | 20. 28, 29 | 21. 365 |
| 22. 366 | | |

Apply Your Mind!

1. 4 hours 2. 30 min 3. 8 Sec
4. 8, 15, 22, 29.



12.

Money

Task-1

1. (a) ₹ 34.50 (b) ₹ 23.50 (c) ₹ 69
(d) ₹ 205 (e) ₹ 514.50

Task-2

1. Cost of Book = ₹ 55 = Total cost of book = $55 \times 1 = ₹ 55$
No. of items = 1
Cost of Bag = ₹ 250 \therefore Total cost of Bag = $250 \times 1 = ₹ 250$
No. of items = 1
No. of Pen = ₹ 10 \therefore Total cost of pen = $10 \times 1 = ₹ 10$
No. of items = 1
Grand Total = ₹ 55 + ₹ 250 + ₹ 10 = ₹ 315
2. Bill for 1 bag, 1 plank and 2 pens
Cost of Bag = ₹ 250 Total cost of bag = $250 \times 1 = ₹ 250$
No. of items = 1
Cost of plank = ₹ 60 total cost of plank = $60 \times 1 = ₹ 60$
No. of items = 1
Cost of pens = ₹ 10 Total cost of Pens = $10 \times 2 = ₹ 20$
No. of items = 2
Total bill = ₹ 250 + ₹ 60 + ₹ 20 = ₹ 330

Learning through puzzle

$$\triangle 25 + \triangle 25 + \square 4 = ₹ 54$$

$$\square 4 + \square 4 + \square 4 = ₹ 12$$

$$\text{So value of } \triangle 25 - \square 4 = ₹ 12$$

Task-3

- 1 rupee = 100 paise
1. ₹ 19.55 p = ₹ 19 + 55 p = $19 \times 100 + 55$
= 1900 + 55 = 1955 p

2. ₹ 38.00 p = ₹ 38 + 00 p = $38 \times 100 + 00$
= 3800 + 00 = 3800 p
3. ₹ 158.25 p = ₹ 158 + 25 p = $158 \times 100 + 25$
= 15800 + 25 = 15825 p
4. ₹ 15.08 p = ₹ 15 + 8 p = $15 \times 100 + 8$
= 1500 + 8 = 1508 p
5. ₹ 80.00 p = ₹ 80 + 00 p = $80 \times 100 + 00$
= 8000 + 00 = 8000 p
6. ₹ 136.75 = ₹ 136 + 75 = 13675 p

Just 4 fun

Maximum amount spent by Sankar

Learning Target 12.1

1. Siva's father gave two ₹ 10 notes = $2 \times 10 = ₹ 20$
Siva's father gave one ₹ 100 note = $1 \times 100 = 100$
Siva's father gave one ₹ 50 note = $1 \times 50 = ₹ 50$
Total amount he gave = ₹ 170
2. Arjun wants to buy a car cost = ₹ 25
He needs more money to buy a car = - ₹ 8
Money he have now = ₹ 17
3. Ramya bought milk = ₹ 25.50 p
She bought cheese cube = + ₹ 50.25 p
Total amount she paid = ₹ 75.75 p
4. Radha bought apples = ₹ 85.50 p
She bought bananas = + ₹ 50.55 p
Total money spent = ₹ 136.05 p
She gave to shopkeeper = ₹ 200.00 p
Money spent = ₹ 136.05 p
Money left = ₹ 63.95 p

Learning through puzzle

- (a) $x = 5, 5 \times 20 = 100$ paise
 $x = 2, 2 \times 10 = + 20$ paise
₹ 1.20 paise

Catch The Concept

1. Rupees, paise
2. 100
3. 10
4. 2
5. 5.

Apply Your Mind!

1. Two mangoes priced = ₹ 24
So one mango priced = ₹ 24 ÷ 2 = ₹ 12
So five mangoes priced = 12 × 5 = ₹ 60
2. Total rupees = 38
8 p more = ₹ 38 + 8 p = ₹ 38.08 p
3. Two, 2 hundred rupees notes = 2 × 200 = ₹ 400
Three 50 rupees notes = 3 × 50 = ₹ 150
Four 50 paise coins = 4 × 50 = ₹ 2
Total value = ₹ 552



Model Test Paper-I

1. (a) Nine thousand eight hundred forty six
(b) Fifty four thousand two hundred fifteen
2. (a) 4,562 (b) 9, 115
3. (a)
$$\begin{array}{r} 3\ 8\ 2\ 4 \\ + 1\ 4\ 9\ 2 \\ \hline 5\ 3\ 1\ 6 \end{array}$$
 (b)
$$\begin{array}{r} 2\ 0\ 1\ 8 \\ + 2\ 0\ 1\ 7 \\ \hline 2\ 0\ 1\ 7 \end{array}$$
 (c)
$$\begin{array}{r} 1\ 2\ 1\ 4 \\ + 2\ 4\ 5\ 3 \\ \hline 3\ 6\ 6\ 7 \end{array}$$
4. (a) Addition (b) ones
(c) 9999 (d) 500
5. (a) Number of palm trees = 3 6 5
Number of mango trees = + 5 8 2
Total number of both trees = 9 4 7
- (b) Number of palm trees = 3 6 5
Number of guava trees = + 5 4 9
Total number of both trees = 9 1 4
- (c) Number of mango trees = 5 8 2
Number of guava trees = + 5 4 9
Total number of both trees = + 11 3 1
6. Runs scored by batsman A = 6 5 4 2
Runs scored by batsman B = - 5 9 8 2
Net run scored by batsman A = 3 6 0



Model Test Paper-II

1. (a) <table style="display: inline-table; border-collapse: collapse;"> <tr><td style="text-align: right;">Km</td><td style="text-align: left;">m</td></tr> <tr><td style="text-align: right;">3 3 6</td><td style="text-align: left;">5 5 3</td></tr> <tr><td style="text-align: right;">+ 3 5 1</td><td style="text-align: left;">3 2 5</td></tr> <tr><td style="text-align: right;"><u>6 8 7</u></td><td style="text-align: left;"><u>8 7 8</u></td></tr> </table>	Km	m	3 3 6	5 5 3	+ 3 5 1	3 2 5	<u>6 8 7</u>	<u>8 7 8</u>	(b) <table style="display: inline-table; border-collapse: collapse;"> <tr><td style="text-align: right;">Km</td><td style="text-align: left;">m</td></tr> <tr><td style="text-align: right;">1 7 6</td><td style="text-align: left;">5 8 5</td></tr> <tr><td style="text-align: right;">+ 2 2 1</td><td style="text-align: left;">3 0 0</td></tr> <tr><td style="text-align: right;"><u>3 9 7</u></td><td style="text-align: left;"><u>8 8 5</u></td></tr> </table>	Km	m	1 7 6	5 8 5	+ 2 2 1	3 0 0	<u>3 9 7</u>	<u>8 8 5</u>
Km	m																
3 3 6	5 5 3																
+ 3 5 1	3 2 5																
<u>6 8 7</u>	<u>8 7 8</u>																
Km	m																
1 7 6	5 8 5																
+ 2 2 1	3 0 0																
<u>3 9 7</u>	<u>8 8 5</u>																

Km	m
2 8 5	4 0 6
+ 3 9 3	6 3 2
<u>6 7 9</u>	<u>0 3 8</u>

2. (a) <table style="display: inline-table; border-collapse: collapse;"> <tr><td style="text-align: right;">Km</td><td style="text-align: left;">m</td></tr> <tr><td style="text-align: right;">4 5 5</td><td style="text-align: left;">5 8 9</td></tr> <tr><td style="text-align: right;">- 1 5 3</td><td style="text-align: left;">4 5 1</td></tr> <tr><td style="text-align: right;"><u>3 0 2</u></td><td style="text-align: left;"><u>1 3 8</u></td></tr> </table>	Km	m	4 5 5	5 8 9	- 1 5 3	4 5 1	<u>3 0 2</u>	<u>1 3 8</u>	(b) <table style="display: inline-table; border-collapse: collapse;"> <tr><td style="text-align: right;">Km</td><td style="text-align: left;">m</td></tr> <tr><td style="text-align: right;">3 5 9</td><td style="text-align: left;">6 3 8</td></tr> <tr><td style="text-align: right;">- 3 3 2</td><td style="text-align: left;">6 2 3</td></tr> <tr><td style="text-align: right;"><u>2 7 0</u></td><td style="text-align: left;"><u>1 5</u></td></tr> </table>	Km	m	3 5 9	6 3 8	- 3 3 2	6 2 3	<u>2 7 0</u>	<u>1 5</u>
Km	m																
4 5 5	5 8 9																
- 1 5 3	4 5 1																
<u>3 0 2</u>	<u>1 3 8</u>																
Km	m																
3 5 9	6 3 8																
- 3 3 2	6 2 3																
<u>2 7 0</u>	<u>1 5</u>																

(c) Km	m
7 5 5	4 6 7
- 6 7 8	3 9 0
<u>7 7</u>	<u>7 7</u>

3. (a) $2 \times 1000 + 500 \text{ g} = 2000 \text{ g} + 500 \text{ g} = 2500 \text{ g}$

(b) $3 \times 1000 + 50 \text{ g} = 3000 \text{ g} + 50 \text{ g} = 3050 \text{ g}$

(c) $4 \times 1000 + 250 \text{ g} = 4000 \text{ g} + 250 \text{ g} = 4250 \text{ g}$

(d) $5 \times 1000 + 100 \text{ g} = 5000 \text{ g} = 5100 \text{ g}$

4. (a) Cube (b) Cuboid (c) Oval

5. Dipika goes to school = 8:00 a.m.

She come back form school = 12:00 non

Time she spend in school = 4 hours

6. Total cost pirce of a toy = ₹ 2 5

Arjun needs more money = - ₹ 8

Money Arjun have now = ₹ 1 7

