

# *Problems on Train Partner*

**ANKTRAIN**

( Code chef )

***By Prince Agarwal***  
***[ “ Hello World ” ]***

# Train Partner

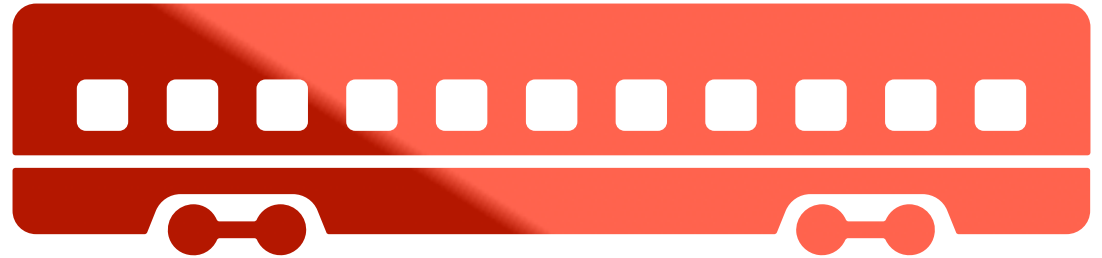


Rashi



Rahul

Train



Side view

Train coach

Top view

UB	<div>3</div>	<div>6</div>
MB	<div>2</div>	<div>5</div>
LB	<div>1</div>	<div>4</div>

LB	<div>1</div>	<div>4</div>	<div>9</div>	<div>12</div>	<div>17</div>	<div>20</div>	<div>25</div>	<div>28</div>	<div>33</div>	<div>36</div>
MB	<div>2</div>	<div>5</div>	<div>10</div>	<div>13</div>	<div>18</div>	<div>21</div>	<div>26</div>	<div>29</div>	<div>34</div>	<div>37</div>
UB	<div>3</div>	<div>6</div>	<div>11</div>	<div>14</div>	<div>19</div>	<div>22</div>	<div>27</div>	<div>30</div>	<div>35</div>	<div>38</div>
	<div>7</div>	<div>8</div>	<div>15</div>	<div>16</div>	<div>23</div>	<div>24</div>	<div>31</div>	<div>32</div>	<div>39</div>	<div>40</div>
	SL	SU								

# Train coach

Top view

UB

3

6

MB

2

5

LB

1

4

LB

1

4

9

12

17

20

25

28

33

36

MB

2

5

10

13

18

21

26

29

34

37

UB

3

6

11

14

19

22

27

30

35

38

7

8

15

16

23

24

31

32

39

40

SL

SU

SU ->

N = 8 , 16 , 24 , 32 , 40

N % 8 == 0

N-1

SL

After dividing from digit 8

Remainder	Solution	Coach
0	N-1	SL

# Train coach

Top view

UB

3

6

MB

2

5

LB

1

4

LB

1

4

9

12

17

20

25

28

33

36

MB

2

5

10

13

18

21

26

29

34

37

UB

3

6

11

14

19

22

27

30

35

38

7

8

15

16

23

24

31

32

39

40

SL

SU

SL ->

N = 7, 15, 23, 31, 39

N % 8 == 7

N+1

SU

## After dividing from digit 8

Remainder	Solution	Coach
0	N-1	SL
7	N+1	SU

# Train coach

Top view

UB

3

6

MB

2

5

LB

1

4

LB

1

4

9

12

17

20

25

28

33

36

MB

2

5

10

13

18

21

26

29

34

37

UB

3

6

11

14

19

22

27

30

35

38

7

8

15

16

23

24

31

32

39

40

SL

SU

LB ->

$N = 1, 9, 17, 25, 33$

$N \% 8 == 1$

$N+3$

LB



## After dividing from digit 8

Remainder	Solution	Coach
0	N-1	SL
7	N+1	SU
1	N+3	LB

# Train coach

Top view

UB

3

6

MB

2

5

LB

1

4

LB

1

4

9

12

17

20

25

28

33

36

MB

2

5

10

13

18

21

26

29

34

37

UB

3

6

11

14

19

22

27

30

35

38

7

8

15

16

23

24

31

32

39

40

SL

SU

LB ->

N = 4, 12, 20, 28, 36

N % 8 == 4

N-3

LB

## After dividing from digit 8

Remainder	Solution	Coach
0	N-1	SL
7	N+1	SU
1	N+3	LB
4	N-3	LB

# Train coach

Top view

UB

3

6

MB

2

5

LB

1

4

LB	1	4	9	12	17	20	25	28	33	36
MB	2	5	10	13	18	21	26	29	34	37
UB	3	6	11	14	19	22	27	30	35	38
	7	8	15	16	23	24	31	32	39	40
	SL	SU								

MB -> N = 2, 10, 18, 26, 34

$N \% 8 == 2$

N+3 MB

MB -> N = 5, 13, 21, 29, 37

$N \% 8 == 5$

N-3 MB

## After dividing from digit 8

Remainder	Solution	Coach
0	N-1	SL
7	N+1	SU
1	N+3	LB
4	N-3	LB
2	N+3	MB
5	N-3	MB

# Train coach

Top view

UB

3

6

MB

2

5

LB

1

4

LB	1	4	9	12	17	20	25	28	33	36
MB	2	5	10	13	18	21	26	29	34	37
UB	3	6	11	14	19	22	27	30	35	38
	7	8	15	16	23	24	31	32	39	40
	SL	SU								

UB -> N = 3, 11, 19, 27, 35

$N \% 8 == 3$

N+3

UB

UB -> N = 6, 14, 22, 30, 38

$N \% 8 == 6$

N-3

UB

### After dividing from digit 8

Remainder	Solution	Coach
0	N-1	SL
7	N+1	SU
1	N+3	LB
4	N-3	LB
2	N+3	MB
5	N-3	MB
3	N+3	UB
6	N-3	UB

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## Hello World

*“ If you feel any problem then comments in my video  
I will reply as soon as possible “*

***- Prince Agarwal***