

Answer 1 -

The Equivalence Class Partitions with Boundary Values look like the following (Note: \$ and trailing zeroes are omitted to save space):

$-\infty$	0	0.01	2000	2000.01	7500	7500.01	14999.99	15000	25000	25000.01	29999.99	30000	∞
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There are 7 ECPs and 14BVs, means there should be 14 test cases. The test cases are below

	Inputs	Expected Output		
Test Case	Current Balance	Interest Paid	Gift Card	Status
Case 1	-\$500.00	-\$35.00	No	Low Balance
Case 2	\$0.00	-\$35.00	No	Low Balance
Case 3	\$0.01	\$0.00	No	Normal Balance
Case 4	\$2,000.00	\$43.00	No	Normal Balance
Case 5	\$2,000.01	\$47.00	No	Normal Balance
Case 6	\$7,500.00	\$176.25	No	Normal Balance
Case 7	\$7,500.01	\$191.25	No	Normal Balance
Case 8	\$14,999.99	\$382.49	No	Normal Balance
Case 9	\$15,000.00	\$442.50	No	Normal Balance
Case 10	\$25,000.00	\$737.50	No	Normal Balance
Case 11	\$25,000.01	\$787.50	No	Normal Balance
Case 12	\$29,999.99	\$944.99	No	Normal Balance
Case 13	\$30,000.00	\$975.00	Yes	Honored Customer
Case 14	\$50,000.00	\$1,625.00	Yes	Honored Customer

Answer 2 -

The significance for volume of people will be 1 and we have taken it as an integer. We have only been given the average and the peak volume. We need to calculate the low volume. There are 7 hours of peak traffic and 17 hours of low volume.

A factor of 2.33 means the volume at peak hours is $3.33 \times 500 = 1665$. To calculate the low volume we use $(500 \times 12 - 1665 \times 7) / 17 = 20$ people/hour.

The significance of time is 1 second. The day starts at 12:00:00AM and goes up to 11:59:59PM the same day.

The Equivalence Class Partition with Boundary Values are as under -

12:00:00AM 4:59:59AM	5:00:00AM 8:59:59AM	9:00:00AM 2:59:59PM	3:00:00PM 5:59:59PM	6:00:00PM 11:59:59PM
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There are 5 ECPs and 10BVs. There are 30 test cases as below-

	Input		Expected Output	
Test Case	Time	Type Day	Passengers/Hr	Volume Type
Case 1	12:00:00 AM	Weekday	20	Low
Case 2	04:59:59 AM	Weekday	20	Low
Case 3	05:00:00 AM	Weekday	1665	High
Case 4	08:59:59 AM	Weekday	1665	High
Case 5	09:00:00 AM	Weekday	20	Low
Case 6	02:59:59 PM	Weekday	20	Low
Case 7	03:00:00 PM	Weekday	1665	High
Case 8	05:59:59 PM	Weekday	1665	High
Case 9	06:00:00 PM	Weekday	20	Low
Case 10	11:59:59 AM	Weekday	20	Low
Case 11	12:00:00 AM	Weekend	16	Low
Case 12	04:59:59 AM	Weekend	16	Low
Case 13	05:00:00 AM	Weekend	1332	High

Case 14	08:59:59 AM	Weekend	1332	High
Case 15	09:00:00 AM	Weekend	16	Low
Case 16	02:59:59 PM	Weekend	16	Low
Case 17	03:00:00 PM	Weekend	1332	High
Case 18	05:59:59 PM	Weekend	1332	High
Case 19	06:00:00 PM	Weekend	16	Low
Case 20	11:59:59 AM	Weekend	16	Low
Case 21	12:00:00 AM	Holiday	72	Low
Case 22	04:59:59 AM	Holiday	72	Low
Case 23	05:00:00 AM	Holiday	5994	High
Case 24	08:59:59 AM	Holiday	5994	High
Case 25	09:00:00 AM	Holiday	72	Low
Case 26	02:59:59 PM	Holiday	72	Low
Case 27	03:00:00 PM	Holiday	5994	High
Case 28	05:59:59 PM	Holiday	5994	High
Case 29	06:00:00 PM	Holiday	72	Low
Case 30	11:59:59 AM	Holiday	72	Low

Answer 3 -

The Equivalence Class Partition of this problem with Boundary Values are as under -

500.0	100.1	100.0	75.1	75.0	50.1	50.0	25.1	25.0	0.0	-0.1	$-\infty$
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There are 6 ECPs and 12 BVs. There are 12 test cases as below -

	Input	Expected Output			
Test Case	Distance is in feet	Red	Yellow	Green	Buzzer
Case 1	500	off	off	off	off
Case 2	100.1	off	off	off	off
Case 3	100	on	off	off	off
Case 4	75.1	on	off	off	off
Case 5	75	on	on	off	off
Case 6	50.1	on	on	off	off
Case 7	50	on	on	on	off
Case 8	25.1	on	on	on	off
Case 9	25	on	on	on	on
Case 10	0.0	on	on	on	on
Case 11	-0.1	off	off	off	off
Case 12	-50	off	off	off	off

Answer 4 -

The Equivalence Class Partitions are as below -

All the values are in dollars, with values truncated to 2 decimal places without rounding

45000.01	54999.99	55000.00	∞
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There are two ECPs and 4 BVs, and there are 4 test cases

	Inputs	Expected Output		
Test Case	Current Balance	Final Balance	Gift Card	Status
Case 1	\$43583.53	\$45000.00	No gift card	Ordinary
Case 2	\$43583.54	\$45,000.01	\$100	Honored
Case 3	\$53268.75	\$54,999.99	\$100	Honored
Case 4	\$53268.76	\$55,135.00	\$135 has been credited to the account	Top