



Date : 21st Jan 2024

Special Question - Quantitative Aptitude

English

Q:1 Directions: Naresh, A businessman has a friend Shivam who is an insurance agent. In January 2010, Ankit proposed Naresh buy insurance for his family members along with him so Naresh bought six life term insurances for; his wife, mother, father, two children & for himself. The premium which he has to deposit every quarter is different for each depending on the number of terms. The months in which their policies are maturing are March 2027, October 2022, September 2025, January 2023, April 2026 & December 2021 in some order.

Unfortunately, In January 2021 Shivam died in an accident, Naresh then saw the following points mentioned in his book to understand his policies.

- 1) The only baby boy of Naresh was born in 2005 whose policy matured on his 18th birthday.
- 2) The maximum number of terms is of Naresh's himself.
- 3) The amount deposited in the account of his father as maturity is 189,000.
- 4) The number of terms of mother is a multiple of 8.
- 5) Premiums of each member is multiple of 1000.
- 6) The sum of the premium that he paid for each policy is 15000 & and the premium for his mother is 5000.
- 7) The premium for Naresh is 3000 & the amount for the boy is 104,000.
- 8) The premium of girl is 1000 less than premium of boy.

If in September 2017, his Mother died of an accident then his family will get $1.5 \times$ of the amount of maturity of his mother, then find how much the total premium paid by Naresh for his mother's policy till then is less than the amount they will get after her accident?

1. 420,000
2. 714,000
3. 210,000
4. 357,000
5. 224,000

Q:2 Directions: Naresh, A businessman has a friend Shivam who is an insurance agent. In January 2010, Ankit proposed Naresh buy insurance for his family members along with him so Naresh bought six life term insurances for; his wife, mother, father, two children & for himself. The premium which he has to deposit every quarter is different for each depending on the number of terms. The months in which their policies are maturing are March 2027, October 2022, September 2025, January 2023, April 2026 & December 2021 in some order.

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 - 4) The number of terms of mother is a multiple of 8.
 - 5) Premiums of each member is multiple of 1000.
 - 6) The sum of the premium that he paid for each policy is 15000 & and the premium for his mother is 5000.
 - 7) The premium for Naresh is 3000 & the amount for the boy is 104,000.
 - 8) The premium of girl is 1000 less than premium of boy.
- The amount which Naresh would get will be how much percent of the amount his father and son would get at the time of maturity?

1. 58.83
2. 38.06
3. 84.75
4. 77.05
5. 69.62

Q:3 Directions: Naresh, A businessman has a friend Shivam who is an insurance agent. In January 2010, Ankit proposed Naresh buy insurance for his family members along with him so Naresh bought six life term insurances for; his wife, mother, father, two children & for himself. The premium which he has to deposit every quarter is different for each depending on the number of terms. The months in which their policies are maturing are March 2027, October 2022, September 2025, January 2023, April 2026 & December 2021 in some order.

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 - 4) The number of terms of mother is a multiple of 8.
 - 5) Premiums of each member is multiple of 1000.
 - 6) The sum of the premium that he paid for each policy is 15000 & and the premium for his mother is 5000.
 - 7) The premium for Naresh is 3000 & the amount for the boy is 104,000.
 - 8) The premium of girl is 1000 less than premium of boy.
- Who has the maximum amount at the maturity time if the

sum of digits of number of terms of his daughter is 6?

1. Mother
2. Boy
3. Naresh
4. Father
5. Wife

Q:4 Directions: Naresh, A businessman has a friend Shivam who is an insurance agent. In January 2010, Ankit proposed Naresh buy insurance for his family members along with him so Naresh bought six life term insurances for; his wife, mother, father, two children & for himself. The premium which he has to deposit every quarter is different for each depending on the number of terms. The months in which their policies are maturing are March 2027, October 2022, September 2025, January 2023, April 2026 & December 2021 in some order.

Unfortunately, In January 2021 Shivam died in an accident, Naresh then saw the following points mentioned in his book to understand his policies.

- 1) The only baby boy of Naresh was born in 2005 whose policy matured on his 18th birthday.
- 2) The maximum number of terms is of Naresh's himself.
- 3) The amount deposited in the account of his father as maturity is 189,000.
- 4) The number of terms of mother is a multiple of 8.
- 5) Premiums of each member is multiple of 1000.
- 6) The sum of the premium that he paid for each policy is 15000 & and the premium for his mother is 5000.
- 7) The premium for Naresh is 3000 & the amount for the boy is 104,000.
- 8) The premium of girl is 1000 less than premium of boy.

Whose premium is the maximum among the family members?

1. Naresh
2. Girl
3. Dad
4. Mother
5. Boy

Q:5 Directions: Naresh, A businessman has a friend Shivam who is an insurance agent. In January 2010, Ankit proposed Naresh buy insurance for his family members along with him so Naresh bought six life term insurances for; his wife, mother, father, two children & for himself. The premium which he has to deposit every quarter is different for each depending on the number of terms. The months in which their policies are maturing are March

2027, October 2022, September 2025, January 2023, April 2026 & December 2021 in some order.

Unfortunately, In January 2021 Shivam died in an accident, Naresh then saw the following points mentioned in his book to understand his policies.

- 1) The only baby boy of Naresh was born in 2005 whose policy matured on his 18th birthday.
 - 2) The maximum number of terms is of Naresh's himself.
 - 3) The amount deposited in the account of his father as maturity is 189,000.
 - 4) The number of terms of mother is a multiple of 8.
 - 5) Premiums of each member is multiple of 1000.
 - 6) The sum of the premium that he paid for each policy is 15000 & and the premium for his mother is 5000.
 - 7) The premium for Naresh is 3000 & the amount for the boy is 104,000.
 - 8) The premium of girl is 1000 less than premium of boy.
- What is the amount he will get by all the policies combined if he paid the premium of his Girl for a lesser number of terms than his wife?

1. 525,000
2. 845,000
3. 727,000
4. 737,000
5. 853,000

Answer Key

1. (3) 2. (5) 3. (1) 4. (4) 5. (5)

Answers and Solutions

Q:1 The correct answer is **Option 3** i.e. **210,000**.

First of all we can see that in a year, Naresh pays premium quarterly i.e. the number of terms will be equal to number of quarters completed after the policy started to the date till policy matures.

Now calculating the number of terms for all maturity years,

March 2027 = $17 \times 4 = 68$

October 2022 = $12 \times 4 + 3 = 51$ (3 quarters of year 2022 from January)

September 2025 = $15 \times 4 + 3 = 63$ (3 quarters of year 2025 from January)

April 2026 = $16 \times 4 + 1 = 65$ (1 quarter of year 2026 from January)

January 2023 = $13 \times 4 = 52$

December 2021 = $11 \times 4 + 4 = 48$ (4 quarters of year 2021 from January)

Now, as given Naresh gives premium of himself for maximum number of terms hence his number of terms would be equal to 68 and his policy will mature in March 2027. Thus, Amount of Naresh = Number of terms \times Premium = $68 \times 3000 = 204,000$

Now given number of terms for Mother would be a multiple of 8 which could only be 48. Hence her policy will mature in December 2021 and her Amount would be = $48 \times 5000 = 240,000$

His boy turned 18 on January 2023 and hence his policy matured on that date as given. So his number of terms would be = 52 and his premium would be = Amount/Number of terms = $104,000/52 = 2000$

Thus Premium of Girl = $2000 - 1000 = 1000$

Now the sum of Premiums of all members = Premium of Naresh + Premium of Father + Premium of Mother + Premium of Wife + Premium of Girl + Premium of Boy
 $15000 = 3000 + \text{Premium of Father} + 5000 + \text{Premium of Wife} + 1000 + 2000$

$4000 = \text{Premium of Father} + \text{Premium of Wife}$

As premiums are multiples of 1000, Premium of Father could be either 1000, 2000 or 3000

Dividing the possible premiums from the amount of Father we get terms as,

$189,000/1000 = 189$

$189,000/2000 = 94.5$

$189,000/3000 = 63$

Now, out of these 63 is the possible term of Father, hence the premium of Father would be 3000 and his policy would mature in September 2025. Premium of Wife would be = $4000 - 3000 = 1000$

Now from the above data we can derive the following table -

Name	Premium	Number of terms	Amount	Maturity
Naresh	3000	68	204,000	March 2027
Wife	1000			
Father	3000	63	189,000	September 2025
Mother	5000	48	240,000	December 2021
Girl	1000			
Boy	2000	52	104,000	January 2023

Amount they will get after her sudden death in an accident = $1.5 \times 240,000 = 360,000$

Premium that Naresh pays for his mother till September 2017 = $5000 \times \text{Number of terms till September 2021}$

Number of terms till September 2017 = $7 \times 4 + 2 = 30$

Premium that Naresh pays for his mother till September 2017 = $5000 \times 30 = 150,000$

Required amount = $360,000 - 150,000 = 210,000$

Q:2 The correct answer is **Option 5** i.e. **69.62**.

First of all we can see that in a year, Naresh pays premium quarterly i.e. the number of terms will be equal to number of quarters completed after the policy started to the date till policy matures.

Now calculating the number of terms for all maturity years,

March 2027 = $17 \times 4 = 68$

October 2022 = $12 \times 4 + 3 = 51$ (3 quarters of year 2022 from January)

September 2025 = $15 \times 4 + 3 = 63$ (3 quarters of year 2025 from January)

April 2026 = $16 \times 4 + 1 = 65$ (1 quarter of year 2026 from January)

January 2023 = $13 \times 4 = 52$

December 2021 = $11 \times 4 + 4 = 48$ (4 quarters of year 2021 from January)

Now, as given Naresh gives premium of himself for maximum number of terms hence his number of terms would be equal to 68 and his policy will mature in March

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2027. Thus, Amount of Naresh = Number of terms \times Premium = $68 \times 3000 = 204,000$

Now given number of terms for Mother would be a multiple of 8 which could only be 48. Hence her policy will mature in December 2021 and her Amount would be = $48 \times 5000 = 240,000$

His boy turned 18 on January 2023 and hence his policy matured on that date as given. So his number of terms would be = 52 and his premium would be = Amount/Number of terms = $104,000/52 = 2000$

Thus Premium of Girl = $2000 - 1000 = 1000$

Now the sum of Premiums of all members = Premium of Naresh + Premium of Father + Premium of Mother + Premium of Wife + Premium of Girl + Premium of Boy
 $15000 = 3000 + \text{Premium of Father} + 5000 + \text{Premium of Wife} + 1000 + 2000$

$4000 = \text{Premium of Father} + \text{Premium of Wife}$

As premiums are multiples of 1000, Premium of Father could be either 1000, 2000 or 3000

Dividing the possible premiums from the amount of Father we get terms as,

$189,000/1000 = 189$

$189,000/2000 = 94.5$

$189,000/3000 = 63$

Now, out of these 63 is the possible term of Father, hence the premium of Father would be 3000 and his policy would mature in September 2025. Premium of Wife would be = $4000 - 3000 = 1000$

Now from the above data we can derive the following table -

Name	Premium	Number of terms	Amount	Maturity
Naresh	3000	68	204,000	March 2027
Wife	1000			
Father	3000	63	189,000	September 2025
Mother	5000	48	240,000	December 2021
Girl	1000			
Boy	2000	52	104,000	January 2023

Required percent = $204000/(189000 + 104000) = 69.62\%$

Q:3 The correct answer is **Option 1** i.e. **Mother**.

First of all we can see that in a year, Naresh pays premium quarterly i.e. the number of terms will be equal to number of quarters completed after the policy started to the date till policy matures.

Now calculating the number of terms for all maturity

years,

March 2027 = $17 \times 4 = 68$

October 2022 = $12 \times 4 + 3 = 51$ (3 quarters of year 2022 from January)

September 2025 = $15 \times 4 + 3 = 63$ (3 quarters of year 2025 from January)

April 2026 = $16 \times 4 + 1 = 65$ (1 quarter of year 2026 from January)

January 2023 = $13 \times 4 = 52$

December 2021 = $11 \times 4 + 4 = 48$ (4 quarters of year 2021 from January)

Now, as given Naresh gives premium of himself for maximum number of terms hence his number of terms would be equal to 68 and his policy will mature in March 2027. Thus, Amount of Naresh = Number of terms \times Premium = $68 \times 3000 = 204,000$

Now given number of terms for Mother would be a multiple of 8 which could only be 48. Hence her policy will mature in December 2021 and her Amount would be = $48 \times 5000 = 240,000$

His boy turned 18 on January 2023 and hence his policy matured on that date as given. So his number of terms would be = 52 and his premium would be = Amount/Number of terms = $104,000/52 = 2000$

Thus Premium of Girl = $2000 - 1000 = 1000$

Now the sum of Premiums of all members = Premium of Naresh + Premium of Father + Premium of Mother + Premium of Wife + Premium of Girl + Premium of Boy
 $15000 = 3000 + \text{Premium of Father} + 5000 + \text{Premium of Wife} + 1000 + 2000$

$4000 = \text{Premium of Father} + \text{Premium of Wife}$

As premiums are multiples of 1000, Premium of Father could be either 1000, 2000 or 3000

Dividing the possible premiums from the amount of Father we get terms as,

$189,000/1000 = 189$

$189,000/2000 = 94.5$

$189,000/3000 = 63$

Now, out of these 63 is the possible term of Father, hence the premium of Father would be 3000 and his policy would mature in September 2025. Premium of Wife would be = $4000 - 3000 = 1000$

Now from the above data we can derive the following table -

Name	Premium	Number of terms	Amount	Maturity
Naresh	3000	68	204,000	March 2027
Wife	1000			
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Mother	5000	48	240,000	December 2021
Girl	1000			
Boy	2000	52	104,000	January 2023

Now as per given question, the sum of digits of number of terms for his girl is 6

Now the number of terms could be 51 or 65 for his girl, but sum of digits of 65 i.e. $6 + 5 \neq 6$

Only $5 + 1 = 6$, hence number of terms of his girl = 51, then amount of girl = $51 \times 1000 = 51000$

Number of terms for his wife = 65

Amount of his wife = $65 \times 1000 = 65000$

Now we can see that maximum amount we can see is of Mother i.e. 240,000

Q:4 The correct answer is **Option 2** i.e. **Mother**

First of all we can see that in a year, Naresh pays premium quarterly i.e. the number of terms will be equal to number of quarters completed after the policy started to the date till policy matures.

Now calculating the number of terms for all maturity years,

March 2027 = $17 \times 4 = 68$

October 2022 = $12 \times 4 + 3 = 51$ (3 quarters of year 2022 from January)

September 2025 = $15 \times 4 + 3 = 63$ (3 quarters of year 2025 from January)

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Now, as given Naresh gives premium of himself for maximum number of terms hence his number of terms would be equal to 68 and his policy will mature in March 2027. Thus, Amount of Naresh = Number of terms \times Premium = $68 \times 3000 = 204,000$

Now given number of terms for Mother would be a multiple of 8 which could only be 48. Hence her policy will mature in December 2021 and her Amount would be = $48 \times 5000 = 240,000$

His boy turned 18 on January 2023 and hence his policy

matured on that date as given. So his number of terms would be = 52 and his premium would be = Amount/Number of terms = $104,000/52 = 2000$

Thus Premium of Girl = $2000 - 1000 = 1000$

Now the sum of Premiums of all members = Premium of Naresh + Premium of Father + Premium of Mother + Premium of Wife + Premium of Girl + Premium of Boy
 $15000 = 3000 + \text{Premium of Father} + 5000 + \text{Premium of Wife} + 1000 + 2000$

$4000 = \text{Premium of Father} + \text{Premium of Wife}$

As premiums are multiples of 1000, Premium of Father could be either 1000, 2000 or 3000

Dividing the possible premiums from the amount of Father we get terms as,

$189,000/1000 = 189$

$189,000/2000 = 94.5$

$189,000/3000 = 63$

Now, out of these 63 is the possible term of Father, hence the premium of Father would be 3000 and his policy would mature in September 2025. Premium of Wife would be = $4000 - 3000 = 1000$

Now from the above data we can derive the following table -

Name	Premium	Number of terms	Amount	Maturity
Naresh	3000	68	204,000	March 2027
Wife	1000			
Father	3000	63	189,000	September 2025
Mother	5000	48	240,000	December 2021
Girl	1000			
Boy	2000	52	104,000	January 2023

Now from the table the maximum premium is of mother i.e. 5000

Q:5 The correct answer is **Option 5** i.e. **853,000**.

First of all we can see that in a year, Naresh pays premium quarterly i.e. the number of terms will be equal to number of quarters completed after the policy started to the date till policy matures.

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April 2026 = $16 \times 4 + 1 = 65$ (1 quarter of year 2026 from January)

January 2023 = $13 \times 4 = 52$

December 2021 = $11 \times 4 + 4 = 48$ (4 quarters of year 2021 from January)

Now, as given Naresh gives premium of himself for maximum number of terms hence his number of terms would be equal to 68 and his policy will mature in March 2027. Thus, Amount of Naresh = Number of terms \times Premium = $68 \times 3000 = 204,000$

Now given number of terms for Mother would be a multiple of 8 which could only be 48. Hence her policy will mature in December 2021 and her Amount would be = $48 \times 5000 = 240,000$

His boy turned 18 on January 2023 and hence his policy matured on that date as given. So his number of terms would be = 52 and his premium would be = Amount/Number of terms = $104,000/52 = 2000$

Thus Premium of Girl = $2000 - 1000 = 1000$

Now the sum of Premiums of all members = Premium of Naresh + Premium of Father + Premium of Mother + Premium of Wife + Premium of Girl + Premium of Boy
 $15000 = 3000 + \text{Premium of Father} + 5000 + \text{Premium of Wife} + 1000 + 2000$

$4000 = \text{Premium of Father} + \text{Premium of Wife}$

As premiums are multiples of 1000, Premium of Father could be either 1000, 2000 or 3000

Dividing the possible premiums from the amount of Father we get terms as,

$189,000/1000 = 189$

$189,000/2000 = 94.5$

$189,000/3000 = 63$

Now, out of these 63 is the possible term of Father, hence the premium of Father would be 3000 and his policy would mature in September 2025. Premium of Wife would be = $4000 - 3000 = 1000$

Now from the above data we can derive the following table -

Name	Premium	Number of terms	Amount	Maturity
Naresh	3000	68	204,000	March 2027
Wife	1000			
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Mother	5000	48	240,000	December 2021
Girl	1000			
Boy	2000	52	104,000	January 2023

Now as per given question, he paid premium of his Girl for a lesser number of times than his wife hence the number of terms of his Girl = 51, hence amount of Girl = $51 \times 1000 = 51,000$

Number of terms for his wife = 65

Amount of his wife = $65 \times 1000 = 65,000$

The sum of all the amounts is = $204,000 + 51,000 + 189,000 + 240,000 + 65,000 + 104,000 = 853,000$