

### Reasoning Ability

**Directions (1-5):** Study the following information carefully and answer the given below.

Eight persons B, D, G, P, L, N, Q and R were born in different years viz. 1976, 1978, 1980, 1984, 1988, 1991, 1995 and 2004. The age of the person is calculated with respect to the year 2021.

“A!B” Means “Two persons were born between A and B”.

“A⊙B” Means “B was born two persons after A”.

“A≤B” Means “The number of persons born before A is one less than the number of persons born after B”.

“A@B” Means “Only one person was born between A and B”.

“A+B” Means “The sum of ages of A and B is an odd number”.

“A#B\*C#D” Means “The number of persons born between A and B is one more than the number of persons born between C and D”.

“A&B” Means “As many persons born after A as born before B”.

“A)B” Means “More than three persons were born between A and B”.

**Note:** “A^! B” means “Two persons were born between A and B and A’s age is a prime number”.

**Condition:** Q^!B⊙G≤P; B+N@D#Q\*G#N; R&L)D

**1. Who among the following person was born in the year 1978?**

- A. The one who was born immediately before P
- B. R

- C. The one who was born two persons before N
- D. L
- E. D

**2. What is the age difference between Q and the one who was born immediately after N?**

- A. 17
- B. 9
- C. 11
- D. 4
- E. 8

**3. If B is related to G and P is related to R in a certain way, then who among the following person is related to the one who was born in 1984?**

- A. The one who was born two persons before N
- B. D
- C. The one who was born immediately before B
- D. Q
- E. The one who was born immediately before G

**4. Four of the following are alike in a certain way based on the given arrangement and thus form a group. Which one of the following does not belong to the group?**

- A. The one who was born three persons after P
- B. P
- C. The one who was born immediately before G
- D. Q
- E. G

5. As many persons born before Q as after\_\_\_\_\_.

- A. The one who was born in 1995
- B. G
- C. The one who was born in 1976
- D. P
- E. None of these

**Directions (6-10):** Study the following information carefully and answer the below questions

Eight couples got married in different years 1957, 1962, 1969, 1973, 1975, 1981, 1984 and 1990. The males are K, L, M, N, O, P, Q and R. The females are S, T, U, V, W, X, Y and Z.

A\$B means A was married to B

A\*B means A was not married to B

A>B means B was married immediately after A and B got married in an odd numbered year after 1974

A@B means A was married six years after B

A!B means two couples got married between A and B

A#B means the number of couples married after B is two more than the number of couples married after A

A%B means A was married twelve years after B

A^B means A was married immediately before B.

A&B means A was married eleven years before B.

**Conditions:**

M>X; S!P; P@U; S^R; L\$V; V%N; N^Y; Z&Q;  
P\*T;R#K;

6. Who among the following person was married to Q and in which year?

- A. S, 1981
- B. T, 1973
- C. Y, 1969
- D. U, 1984
- E. Z, 1975

7. Which of the following couple got married in the year 1973?

- A. RZ
- B. OV
- C. KZ
- D. NT
- E. QW

8. Four of the following five are alike in a certain way as per the given arrangement and hence form a group. Find the one that doesn't belong to that group.

- A. QS
- B. XL
- C. VM
- D. YS
- E. WP

9. How many couples got married after O?

- A. Ten
- B. Fourteen
- C. Eight
- D. Twelve
- E. Six

10. Which of the following person got married in a leap year?

- A. N
- B. V

- C. S
- D. Q
- E. Z

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**Answer Key with Explanation**

Directions (1-5):

1. Answer: D
2. Answer: C
3. Answer: E
4. Answer: B (All the person's age is a prime number except option b)
5. Answer: D

Final arrangement

Year	Age	Persons
1976	45	B
1978	43	L
1980	41	G
1984	37	Q
1988	33	P
1991	30	N
1995	26	R
2004	17	D

We have,

"A!B" Means "Two persons were born between A and B".

"A©B" Means "B was born two persons after A".

"A≤B" Means "The number of persons born before A is one less than the number of persons born after B".

"A@B" Means "Only one person was born between A and B".

"A+B" Means "The sum of ages of A and B is an odd number".

"A#B\*C#D" Means "The number of persons born between A and B is one more than the number of persons born between C and D".

"A&B" Means "As many persons born after A as before B".

"A)B" Means "More than three persons were born between A and B".

Note: "A^!B" means "Two persons were born between A and B and A's age is a prime number".

Q^!B©G≤P

- Only two persons were born between Q and B, and age of Q's age is a prime number.
- G was born two persons after B.

- The number of persons born before G is one less than the number of persons born after P.

From the above condition, there are three possibilities

		Case-1	Case-2	Case-3
Year	Age	Persons	Persons	Persons
1976	45	P	B	P
1978	43	Q		
1980	41		G	
1984	37		Q	
1988	33	B	P	B
1991	30			
1995	26	G		G
2004	17			Q

Again we have,

**B+N@D#Q\*G#N**

- Only one person was born between N and D.
- The sum of the ages of N and B is an odd number.
- The number of persons born between D and Q is one more than the number of persons born between G and N.

After applying the above conditions case-3 gets eliminated

		Case-1	Case-2	<del>Case-3</del>
Year	Age	Persons	Persons	Persons
1976	45	P	B	P
1978	43	Q		
1980	41		G	
1984	37	D	Q	D
1988	33	B	P	B
1991	30	N	N	N
1995	26	G		G
2004	17		D	Q

Again we have,

**R&L) D**

- As many persons born after R as before L.
- More than three persons were born between L and D.

After applying the above conditions case-1 gets eliminated, hence case-2 shows the final arrangement

		<del>Case-1</del>	Case-2
Year	Age	Persons	Persons
1976	45	P	B
1978	43	Q	L
1980	41		G
1984	37	D	Q
1988	33	B	P
1991	30	N	N
1995	26	G	R
2004	17		D

Directions (6-10):

- 6. Answer: D
- 7. Answer: C
- 8. Answer: E (W and P are married to each other)
- 9. Answer: E
- 10. Answer: D

Year	Male	Female
1957	N	T
1962	O	Y
1969	L	V
1973	K	Z
1975	M	S
1981	R	X
1984	Q	U
1990	P	W

M>X; S!P; P@U; S^R; L\$V; V%N; N^Y; Z&Q;  
P\*T; R#K;

We have,

- M>X means X was married immediately after M and X got married in an odd numbered year after 1974
- S!P means two couples got married between S and P
- P@U means P was married six years after U
- S^R means S was married immediately before R

From the above conditions, there are four possibilities. Case1a gets eliminated.

	Case1		<del>Case1a</del>	
Year	Male	Female	Male	Female
1957				
1962		S		
1969	R	U		
1973	M		M	
1975	P	X		X
1981				
1984				U
1990			P	

Case2		Case2a	
Male	Female	Male	Female
	S		
R			
M	U	M	S
P	X	R	X
			U
		P	

Again we have,

- L\$V means L was married to V
- V%N means V was married 12 years after N
- N^Y means N was married immediately before Y

From the above conditions, Case1 and Case2 get eliminated.

	<del>Case1</del>		<del>Case2</del>		Case2a	
Year	Male	Female	Male	Female	Male	Female
1957	N				N	
1962		S				Y
1969	R	U		S	L	V
1973	M		R			
1975	P	X	M	U	M	S
1981			P	X	R	X
1984						U
1990					P	

Again we have,

- Z&Q means Z married 11 years before Q.
- P\*T means P was not married to T.



- R#K means the number of couples married after K is two more than the number of couples married after R.

From the above conditions, Case2a shows the final arrangement.

	Case2a	
Year	Male	Female
1957	N	T
1962	O	Y
1969	L	V
1973	K	Z
1975	M	S
1981	R	X
1984	Q	U
1990	P	W