

EQUATION

Direction (1-10): Two equations (I) and (II) are given in each question. On the basis of these equations, you have to decide the relation between p and q and give answer.

1. $p > q$ 2. $p < q$ 3. $p = q$ or no relation can be established
 4. $p \geq q$ 5. $p \leq q$

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|---------------------------------|------------------------------|
| 1. I. $6p^2 - 5p + 1 = 0$ | II. $12q^2 - 17q + 6 = 0$ |
| 2. I. $p = \sqrt[3]{4913} = 17$ | II. $\sqrt{q} = (289)^{1/2}$ |
| 3. I. $p^2 - 32p + 255 = 0$ | II. $q^2 - 29q + 210 = 0$ |
| 4. I. $p^2 = 49$ | II. $(q + 8)^2$ |
| 5. I. $p = \sqrt{11}$ | II. $6q^2 - 41q + 70 = 0$ |
| 6. I. $6p^2 - 17p + 12 = 0$ | II. $3q^2 - 4q + 1 = 0$ |
| 7. I. $p^2 + 18p + 80 = 0$ | II. $q^2 + 20q + 100 = 0$ |
| 8. I. $7p - 23 = 3p + 35$ | II. $q^2 - 6q + 9 = 0$ |
| 9. I. $p^2 + p - 462 = 0$ | II. $q^2 + 22q = 0$ |
| 10. I. $p^2 = -57p$ | II. $q^2 = q$ |

Direction (11-22): Two equations (I) and (II) are given in each question. On the basis of these equations, you have to decide the relation between x and y and give answer.

1. $x > y$ 2. $x \geq y$
 3. $x < y$ 4. $x \leq y$
 5. $x = y$ or the relationship cannot be established.

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| 11. I. $x^2 - \sqrt{(1296)^{1/2}} = 58$ | II. $(y)^{7/3} \times (y)^{2/3} - 262 = 250$ |
| 12. I. $2x + 3y = 19$ | II. $7x - 4y = 23$ |
| 13. I. $x^2 + 12 = 7x$ | II. $y^2 + 30 = 11y$ |
| 14. I. $\sqrt{16} + \sqrt{x + 18} = \sqrt{121}$ | II. $y^2 - 640 = 321$ |
| 15. I. $\frac{x^2 - (11)^{5/2}}{\sqrt{x}} = 0$ | II. $18 = \frac{\sqrt{y} - 7}{\sqrt{y}}$ |
| 16. I. $20x^2 - x - 12 = 0$ | II. $20y^2 + 27y + 9 = 0$ |
| 17. I. $x^2 - 218 = 106$ | II. $y^2 - 37y + 342 = 0$ |
| 18. I. $\frac{7}{\sqrt{x}} + \frac{5}{\sqrt{x}} = \sqrt{x}$ | II. $y^2 - (12)^{5/2} = 0$ |
| 19. I. $\sqrt{361x} + \sqrt{16} = 0$ | II. $\sqrt{441y} + 4 = 0$ |
| 20. I. $4x^2 - 16x + 15 = 0$ | II. $2y^2 - 5y + 3 = 0$ |
| 21. I. $x^2 - 11x + 24 = 0$ | II. $2y^2 - 9y + 9 = 0$ |
| 22. I. $x^3 \times 13 = x^2 \times 247$ | II. $y^{1/3} \times 14 = 294 \div y^{2/3}$ |

BLOOD RELATIONSHIP

Type I - Statement Based

1. Pointing to a lady in the photograph, Priya said, "Her son's father is the son-in-law of my mother." How is Priya related to the lady?

1. Aunt 2. Sister 3. Mother 4. Cousin 5. None of these

2. Pointing to the woman in the picture, Rajiv said. "Her mother has only one grandchild whose mother is my wife". How is the woman in the picture related to Rajiv?

1. Cousin 2. Wife 3. Sister 4. Data inadequate 5. None of these

3. Introducing a girl, Vipin said, "Her mother is the only daughter of my mother-in-law." How is Vipin related to the girl?

1. Uncle 2. Father 3. Brother 4. Husband 5. None of these

Type II - Symbol-Statement Relationship

'A x B' means 'A is the sister of B', 'A ÷ B' means 'A is the daughter of B', 'A - B' means 'A is the son of B'

4. On the basis of this information you have to tell, how is P related to S in the relationship $P - Q \times R \div S$?

1. Bother 2. Son 3. Grandson 4. Cousin 5. Daughter's son

5. If 'P \$ Q' means 'P is father of Q', 'P # Q' means 'P is mother of Q', 'P * Q' means 'P is sister of Q' then how is D related to N in $N \# A \$ B * D$?

1. Nephew 2. Grandson 3. Granddaughter 4. Data inadequate 5. None of these

Directions (6-10): Study the given information and answer the following questions.

'A + B' means 'A is son of B'

'A ÷ B' means 'A is wife of B'

'A x B' means 'A is brother of B'

'A - B' means 'A is daughter of B'

6. How is R related to P in the expression 'P + Q x R + T'?

1. Paternal uncle 2. Sister 3. Brother 4. Father 5. None of these

7. How is M related to L in the expression 'L x R + Q ÷ M'?

1. Grandfather 2. Mother 3. Father 4. Brother 5. None of these

8. Which of the following means 'P is sister of S'?

1. $P + Q \div R - S$ 2. $P \times Q - R \div S$ 3. $P - Q + R \times S$ 4. $P + Q \div R \times S$ 5. None of these

9. What should be placed in place of question marks to establish that T is father of Q in the given expression? $Q \times P ? V ? T \times R$

1. x, x 2. +, - 3. x, + 4. +, + 5. None of these

10. How is S related to Z in the expression 'S + T - Q + Z'?

1. Father 2. Sister 3. Mother 4. Grandson 5. None of these

Type III - Data sufficiency

Direction (11-15): Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statement are sufficient to answer the questions. Read both the statement and give answer.

1. If the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.

2. If the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.

3. If the data either in statement I alone or in statement II alone are sufficient to answer the question.

4. If the data even in both the statement I and II together are not sufficient to answer the question.

5. If the data in both the statement I and II together are necessary to answer the question.

11. How is W related to D?

I. A is brother of W and father of D.

II. A has only one son D. A is brother of W, who is wife of E.

12. Is Q granddaughter of P?

I. P is mother of A and has two grandchildren.

II. The brother of A has two children Q and R.

13. How many brothers does R have?

I. X is the only son of Mr. Verma, who is father of K.

II. X is brother of K, who is the only sister of R.

14. How is X related to N?

I. X is mother of J. T is married to Z. N is daughter of T. Z is brother of J.

II. X is married to Y. Y is father of J. J is married to L. J is uncle of N.

15. Is P aunt of M?

I. A is son of P. A is brother of B. B is daughter of C. F is sister of C. M is daughter of F.

II. D is father of M. F is mother of M. K is brother of F. K has two children J and R. P is married to K.

CODING AND DECODING

1. LETTER CODING:

1. In a certain code, 'COURAGE' is code as 'UOCREGA'. How is JOURNAL written in that code?
1. UOJRALN 2. UOJRAMN 3. UVTOZNV 4. VUTROJN 5. None of these
2. In a certain code, APPLE is code as BPPLD and CEAT is code as DEAS, then how is HEART written in that
1. IEART 2. IEARS 3. GEARU 4. IEAPS 5. None of these
3. In a certain code, 'INDIA' is code as 'KLBKC' and FISCAL is written as DKQACJ. How is TOPIC written
1. VMRGE 2. RQNKA 3. VQNGA 4. RMNGE 5. None of these
4. In a certain code, 'SECTOR' is code as 'RHBWNU'. How is POLICE written in that code?
1. SNOHFD 2. ORKLBH 3. SMOLBD 4. ORSKFD 5. None of these
5. If BREAKING is coded as BFSCFMHJ then how will MOTHERLY be coded?
1. IUPNZMSF 2. IUPNXXQD 3. IUPNFMSZ 4. GSNLZMSF 5. None of these
6. In a certain code, 'COMPUTER' is code as 'LNBVQSFU'. How is 'BULKHEAD' written in that code?
1. MVCILEBF 2. KTAILEBF 3. MTAGJEBF 4. KTAGJEBF 5. None of these
7. If 'MAPLE' is coded as 'VOKZN' then how will 'CAMEL' be coded?
1. OVNZD 2. OUNZD 3. OVNZX 4. XZNVD 5. None of these
8. In a certain code, 'STREAMLINE' is code as 'BFSUTDMHKL'. How is 'SCIENTIFIC' written in that
1. MDHBRBHEHS 2. OFJDTBHEHS 3. MDHBRDJGJU 4. OFJDTDJGJU 5. None of these
9. In a certain code, 'GLAMOUR' is code as 'BMHLOQTN'. How is 'SERVING' written in that code?
1. TFSUFMH 2. QDRTFMH 3. QDRTHOJ 4. SFTUFMH 5. None of these
10. In a certain code, 'JOYRIDE' is code as 'ZPKODCH'. How is 'MEASURE' written in that code?
1. NFBRFEJ 2. NFBRDQT 3. BFNRF EJ 4. BFNRDQT 5. None of these

2. NUMBER CODING

1. If LOAD is coded as 121514, then BAKE will be coded as:
1. 21105 2. 21115 3. 21125 4. 21104 5. None of these
2. In a certain code LONG is written as 5123 and GEAR is written as 3748. How is LANE written in that
1. 5427 2. 5247 3. 5847 4. 5237 5. None of these
3. If CENTURION is coded as 325791465, and RANK is coded as 18510, what will the figures 78510 represent?
1. BANK 2. SANK 3. TANK 4. TALK 5. None of these
4. If 1 is coded as \$, 5 is coded as %, 6 is coded as «, 3 is coded as +, 7 is coded as # and 4 is coded as ?
What will be the correct form of the number 435671?
1. ? + % « # \$ 2. ? + % \$ # « 3. ? + « % # \$ 4. \$ # « % + ? 5. None of these
5. In a certain code FINANCE is written as # \$ 5 % 5 7 @ and ECONOMY is written as @ 7 © 5 © * 2. How is FEMINA written in that code ?
1. # * @ 7 % © 2. # @ © \$ 7 % 3. # @ * \$ 5 % 4. @ # * 7 2 % 5. None of these

3. RELATIONSHIP CODING

1. If Yellow is called Green, Green is called Black, Black is called White, White is called Red, Red is called Blue, Blue is called Orange then what is the colour of milk ?
1. White 2. Black 3. Red 4. Green 5. None of these
2. If 'fork' is called 'plate', 'plate' is called 'knife', 'knife' is called 'jug', 'jug' is called 'glass', 'glass' is called 'cup' and 'cup' is called 'fork', by what do we cut fruit?
1. spoon 2. jug 3. glass 4. saucer 5. None of these

3. If Rajdoot is coded as Car, Car as Aeroplane, Aeroplane as Train, Train as Bus, then by which vehicle can you reach your destination in least time? .

1. Aeroplane 2. Train 3. Car 4. Bus 5. None of these

4. If Pen is coded as Pencil, Pencil as Chalk, Chalk as Slate, Slate as Paper, then by which do you mostly write?

1. Pen 2. Pencil 3. Chalk 4. Slate 5. None of these

5. If 'yellow' is called 'red', 'red' is called 'blue', 'blue' is called 'white', 'white' is called 'black', 'black' is called 'green', and 'green' is called 'violet', what is the colour of clear sky ?

1. Green 2. Violet 3. Yellow 4. Red 5. None of these

4. WORD CODING

1. In a certain code language (i) 'pic vic nic' means "winter is cold" (ii) to nic re means "summer is hot" (iii) vic tho pa means "nights are cold". Which of the following is the code for 'is'?

1. to 2. nic 3. pic 4. vic 5. None of these

2. If in a certain code , 'bir le nac' means 'green and tasty'; 'pic nac hor' means 'tomato is green' and 'coc bir hor' means 'food is tasty'. Which of the following means 'tomato is tasty' in that code?

1. bir le hor 2. pic hor nac 3. hor bir pic 4. none 5. Can't

3. In a certain code language, 'po ki top ma' means 'Usha is playing cards'; 'Kop ja ki ma' means 'Asha is playing tennis'; ki top sop ho' means 'they are playing football'; and 'po sur kop' means 'cards and tennis'. Which word in that language means 'Asha'?

1. ja 2. ma 3. kop 4. top 5. None of these

4. In a certain language (i) kew xas huma deko means ' she is eating apples' (ii) kew tepo qua means "she sells toys" (iii) sut lim deko means "I like apples". Which codes stand for 'she' and 'apples'?

1. deko and tepo 2. xas and deko 3. kew and deko 4. xas and kew 5. None of these

5. In a certain code, 'Dumellara' means 'Hello man', 'KsKgsogile' means 'How are you'? Ke sentle ra' means You are goodman. Then what does 'ke' mean in the above coded language?

1. Good man 2. How are You 3. You Only 4. Hello good man 5. Can't

TABLES

Directions (1-20): Study the following information carefully and answer the questions given below:

1. P, Q, R, S, T, V and W are seven friends left for seven different destinations-Delhi, Chennai, Hyderabad, Bangalore, Kolkata, Chandigarh and Jaipur - each one on a different day of the week. R left for Jaipur on Monday. On the last day of the week the person left for Bangalore. T left the next day of P who left for Chandigarh and on the previous day of W. S left for Kolkata on Friday. Q did not leave for either Hyderabad or Bangalore and W left for Delhi.

1. On which day of the week did Q leave?

1. Sunday 2. Saturday 3. Wednesday 4. Data inadequate 5. None of these

2. Who left for Bangalore?

1. T 2. P 3. V 4. Data inadequate 5. None of these

3. On which day of the week did T leave?

1. Tuesday 2. Thursday 3. Sunday 4. Wednesday 5. None of these

4. Which of the following combinations of person-place is NOT correct?

1. R - Jaipur 2. P - Chandigarh 3. T - Hyderabad 4. V - Bangalore 5. All are correct

5. Who left on Tuesday?

1. P 2. W 3. Q 4. V 5. None of these

2. B, M, T, R, K, H and D are travelling in a train compartment with III- tier sleeper berth. Each of them has a different profession of Engineer, Doctor, Architect, Pharmacist, Lawyer, Journalist and Economists. They occupied two lower berths, three middle berths and two upper berths. B, the Engineer is not on the upper berth. The Architect is the only other person who occupies the same type of berth as that of B. M and H are not on the middle berth and their professions are Economists and Lawyer respectively. T is a Pharmacist. D is neither a Journalist nor an Architect. K occupies same type of berth as that of the Doctor.

6. What is D's profession?

1. Doctor 2. Engineer 3. Lawyer 4. Pharmacist 5. Data inadequate

7. Which of the following group occupies middle berth?

1. DKR 2. DHT 3. HKT 4. DKT 5. None of these

8. Which of the following combination of person-berth-profession is correct?

1. R- Lower-Journalist 2. R-Lower -Architect 3. D-Upper-Doctor 4. K-Upper-Lawyer 5. All correct

9. Which of the following pairs occupy the lower berth?

1. BD 2. BK 3. BT 4. Data inadequate 5. None of these

10. Who is the Architect?

1. D 2. H 3. R 4. Data inadequate 5. None of these

3. Seven friends P, F, R, T, Q, N and D are studying different specializations IT, Civil, HR, Marketing, Finance, Journalism and Pharmacy not necessarily in the same order. Each one of them have liking for a different colour red, blue, green, yellow, pink, orange and grey not necessarily in the same order. Three of them are girls.

P likes yellow colour but does not study IT or HR. The one who studies Civil, likes grey colour and is a girl. Q, who is sister of N, studies Marketing and likes pink colour. D's Specialization is in pharmacy and likes red colour. N, the wife of R studies HR and likes green. F likes grey and R likes orange, the one who likes blue studies Finance.

11. Who is studying Civil Engineering?

1. P 2. T 3. F 4. Cannot be determined 5. None of these

12. Which of the following is the group of girls?

1. F, D, N 2. F, Q, N 3. Q, N, P 4. Cannot be determined 5. None of these

13. Which subject is studied by R?

1. Civil 2. Finance 3. Journalism 4. Cannot be determined 5. None of these

14. Who is studying Journalism?

1. P 2. Q 3. R 4. Cannot be determined 5. None of these

15. Which of the following combinations of person - colour and subject is correct?

1. Blue-T-Marketing 2. Pink-N-HR 3. Orange-R-Civil 4. Blue-T-Finance 5. None of these

4. Seven friends, namely L, M, N, O, P, Q and R, like different animated movies, namely Finding Nemo, Rio, Frozen, Up, Lion King, Shrek and Cars, but not necessarily in the same order. Each friend also has a presentation on topics of different subjects, namely Civics, History, English, Geography, Chemistry, Physics and Biology but not necessarily in the same order.

Q has a presentation on Civics and likes neither Frozen nor Up. The one who likes Finding Nemo has a presentation on History. L likes Rio and has a presentation neither on Geography nor on Chemistry. The one who likes Cars has a presentation on Biology. M has a presentation on Physics and does not like Up. The one who likes Up does not have a presentation on Chemistry. O likes Lion King. R does not have a presentation on History and does not like Up. P does not like Up.

16. On which of the following subjects does P have a presentation?

1. Chemistry 2. English 3. Biology 4. Other than those given as options 5. Geography

17. Four of the following five form a group as per the given arrangement. Which of the following does not belong to that group?

1. R-Cars 2. Q-Shrek 3. N-Up 4. M-Frozen 5. P-Rio

18. Which of the following combinations is definitely correct?

1. N-Chemistry 2. R-History 3. L-English 4. All are correct 5. P-Geography

19. Which of the following combinations of movie and subject is definitely correct with respect to N?

1. Up-Chemistry 2. None of these 3. Shrek-Geography 4. Up-Geography 5. Finding Nemo-History

20. Four of the following five form a group as per the given arrangement. Which of the following does not belong to that group?

1. Biology-Cars 2. Chemistry-Lion King 3. Civics-Shrek 4. English-Frozen 5. Geography-Up

COLUMNS

Directions (Q.1-15): Study the following information carefully and answer the questions given below:

1. There are six persons J, K, L, M, N and O'. Each of them lives on six different floors of a building. The ground floor is numbered 1, the floor above it is numbered 2 and so on. M lives on an even-numbered floor but does not live on the topmost floor. J does not live on an even-numbered floor. O lives on an odd-numbered floor. There are two floors between the floors on which O and L live. J lives on a floor immediately below L's floor. N lives on fourth floor.

1. Who among the following lives on the topmost floor?

1. M 2. J 3. O 4. K 5. None of these

2. How many floors is/are there between the floors on, which J and K live?

1. None 2. One 3. Two 4. Three 5. None of these

2. Six friends P, Q, R, S, T and Z live in a building but not necessarily in the same order. The building has six floors and only one person lives on each floor. The ground floor is numbered I and the floor above it is numbered II and so on and the topmost floor is numbered VI. S lives immediately above Q. R lives below only T and P. Q does not live on the 1st floor. T does not live on the topmost floor.

3. Who among the following lives on the topmost floor?

1. T 2. P 3. Either T or P 4. S 5. None of these

4. How many persons live between P and Q?

1. One 2. Two 3. None 4. Three 5. None of these

5. How many persons live below S?

1. None 2. One 3. Two 4. Three 5. None of these

3. Seven friends E, G, H, I, J, K and L live on a different floor of a building number 1 to 7. The topmost floor is number 7 & the ground floor is number 1 & so on but not necessarily in the same order. E does not live above G, who does not live on an odd numbered floor. There is only one person between K and J. K does not live above H. L does not live on topmost floor. H lives below two persons but does not live below either J or K. J does not live above the floor on which K lives. K doesn't live on an odd number floor.

6. Who among the following lives on the third floor?

1. L 2. I 3. E 4. Can't be determined 5. None of these

7. Which of the following groups lives on even numbered floors?

1. G,K,L 2. G,K,J 3. L,E,I 4. E,J,H 5. None of these

8. How many persons live between the floor on which I and J live?

1. Two 2. Three 3. Four 4. Five 5. None of these

9. If E lives just below K then who among the following lives one floor no. 1?

1. I 2. L 3. J 4. H 5. None of these

10. Which of the following statements is/are true?

1. G lives on third floor. 2. K lives just below L.
3. There is only one person between G and H. 4. None is true 5. None of these

4. Seven people P, Q, R, S, T, U and V live on separate floors of a 7-floor building. Ground floor is numbered 1, first floor is numbered 2 and so on until the topmost floor is numbered 7. Each one of these is travelling to a different city, viz Delhi, Mumbai, Patna, Chennai, Kolkata, Bengaluru and Lucknow but not necessarily in the same order. Only three people live above the floor on which P lives. Only one person lives between P and the one travelling to Bengaluru. U lives immediately below the one travelling to Mumbai. The one travelling to Mumbai lives on an even-numbered floor. Only three people live between the ones travelling to Bengaluru and Patna. T lives immediately above R. T is not travelling to Patna. Only two people live between Q and the one travelling to Kolkata. The one travelling to Kolkata lives below the floor on which Q lives. The one travelling to Delhi does not live immediately above or immediately below Q. S does not live immediately above or immediately below P. V does not travel to Chennai.

11. Which of the following is true with respect to V as per the given information?

1. The one who lives immediately below V is travelling to Mumbai. 2. V lives on floor no. 7.
3. V lives immediately below T. 4. V lives on the lowermost floor. 5. V is travelling to Bengaluru.

12. Who among the following lives on floor no. 3?

1. The one travelling to Chennai 2. The one travelling to Kolkata 3. R 4. V 5. T

13. Who lives on the floor immediately above T?

1. P 2. Q 3. S 4. V 5. U

14. To which of the following cities is S travelling?

1. Mumbai 2. Bengaluru 3. Patna 4. Kolkata 5. Chennai

15. How many people live between the floors on which S and the one travelling to Mumbai live?

1. None 2. Two 3. One 4. More than three 5. Three