



## IBPS RRB PO 2017

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# Reasoning

## Instructions

In these questions, relationships between different elements is shown in the statements. The statements is followed by two conclusions. Study the conclusions based on the given statement and select the appropriate answer.

### Question 1

**Statement:**  $K > I \geq T \geq E$ ;  $O < R < K$

**Conclusions:** I.  $R < E$  II.  $O < T$

- A Neither conclusion I nor II follows
- B Both conclusions I and II follows
- C Only conclusion II follows
- D Either conclusion I or II follows
- E Only conclusion I follows

**Answer:** A

### Explanation:

According to the given inequalities, K is largest among all but nothing specific can be said about O,R,I,T and E. Hence, no conclusion can be drawn from the given information. So answer will be A

### Question 2

**Statement**  $C < L < O = U = D \geq S > Y$

**Conclusions** I.  $O > Y$  II.  $C < D$

- A Neither conclusion I nor II follows
- B Both conclusions I and II follows
- C Only conclusion I follows
- D Either conclusion II follows
- E Only conclusion I or II follows

**Answer:** B

### Explanation:

As it is given in statement 1 that  $O=U=D$  which is greater than S, Y, L and C hence, the conclusions  $O>Y$  and  $C<D$  can drawn from the given statements.

Hence, answer will be B

### Question 3

**Statement**  $K \geq L > M \geq N$

**Conclusions** I.  $N \leq K$  II.  $N < K$

- A Both conclusions I and II follows
- B Neither conclusion I nor II follows
- C Either conclusion II or II follows
- D Only conclusion I follows
- E Only conclusion II follows

**Answer:** E

**Explanation:**

In conclusion 1, it is given that  $N \leq K$ . That's not possible as N is less than or equal to M which is absolutely less than K. Conclusion 2 is valid as it mentions that  $N < K$ . Hence, only conclusion 2 will follow.

**Question 4**

**Statement:**  $Z \geq Y = W \geq X$

**Conclusions I.**  $W < Z$  **II.**  $W = Z$

- A Only conclusion II follows
- B Only conclusion I follows
- C Neither conclusion I nor II follows
- D Either conclusion I or II follows
- E Both conclusions I and II follows

**Answer:** D

**Explanation:**

According to the given statement  $Z \geq Y$  and  $Y = W$  So  $Z \geq W$

Hence, anyone of the conclusion might be followed. Hence, answer will be D

**Question 5**

**Statement:**  $Z \geq Y = W \geq X$

**Conclusions I.**  $W < Z$  **II.**  $W = Z$

- A Only conclusion II follows
- B Only conclusion I follows
- C Neither conclusion I nor II follows
- D Either conclusion I or II follows
- E Both conclusions I and II follows

**Answer:** D

**Explanation:**

According to the given statement  $Z \geq Y$  and  $Y = W$  So  $Z \geq W$

Hence, anyone of the conclusion might be followed. Hence, answer will be D

**Instructions**

Study the following information and answer the given questions. There are six wires in a table A, B, C, D, E and F. They have different length but not necessarily in the same order. E is greater than C but less than D and B. A is greater than D and B. A is not longest wire. F is 13 cm long and E is 4 long.

**Question 6**

**If D is 5 cm less than F. what would be the length of D ?**

- A 7
- B 8
- C 9

D Cannot be determined

E None of these

Answer: B

**Explanation:**

$D > E > C$  also  $B > E > C$

Now,  $A > D$  and  $A > B$  and A isn't the longest wire.

Possible arrangements :-

1.  $F > A > D > B > E > C$

2.  $F > A > B > D > E > C$

Given E is 4 cm long and F is 13 cm long.

$D = F - 5 = 13 - 5 = 8$  cm.

Hence B.

### Question 7

Which wire has least length ?

A B

B A

C C

D E

E None of these

Answer: C

**Explanation:**

$D > E > C$  also  $B > E > C$

Now,  $A > D$  and  $A > B$  and A isn't the longest wire.

Possible arrangements :-

1.  $F > A > D > B > E > C$

2.  $F > A > B > D > E > C$

Hence the wire having the least length is C.

### Instructions

Study the following information carefully and answer the questions given below :

A, B, C, D, F, G and H are seven football players each playing for a different team. viz. Green.- Red and Blue, with at least two of them in each of these teams. Each of them likes a fruit, viz. Apple. Guava. Banana. Orange, Mango. Papaya and Watermelon, not necessarily in the same order. B plays with F in team Blue and he likes Mango. None of those who play for either team Red or team Green likes either Guava or Banana. D plays with only the one who likes Watermelon. G likes Papaya and he plays in team Red. The one who likes Orange does not play in team Red. 1-1 likes Watermelon and he plays for team Green. A likes Apple and he plays for team Red. C does not like Guava.

### Question 8

Which of the following players play for team Red ?

A GA

B DH

- C GC
- D GF
- E None of These

**Answer: A**

**Explanation:**

B plays with F in team Blue and he likes Mango.

None of those who play for either team Red or team Green likes either Guava or Banana, => B (mango), the one who likes guava and the one who likes banana play for team Blue.

=> Teams red and green have two players each.

G likes Papaya and A likes apple and they both play for team Red.

H likes Watermelon and he plays for team Green along with D.

The one who likes Orange does not play in team Red, => D likes orange.

C does not like Guava, => F likes Guava and C likes Banana.

Players	Teams	Fruits
A	Red	Apple
B	Blue	Mango
C	Blue	Banana
D	Green	Orange
F	Blue	Guava
G	Red	Papaya
H	Green	Watermelon

G and A play for team Red.

=> Ans - (A)

**Question 9**

**In which team do three of them play ?**

- A Blue
- B Red
- C Blue or Red
- D Data inadequate
- E None of these

**Answer: A**

**Explanation:**

B plays with F in team Blue and he likes Mango.

None of those who play for either team Red or team Green likes either Guava or Banana, => B (mango), the one who likes guava and the one who likes banana play for team Blue.

=> Teams red and green have two players each.

G likes Papaya and A likes apple and they both play for team Red.

H likes Watermelon and he plays for team Green along with D.

The one who likes Orange does not play in team Red, => D likes orange.

C does not like Guava, => F likes Guava and C likes Banana.

Players	Teams	Fruits
A	Red	Apple
B	Blue	Mango
C	Blue	Banana
D	Green	Orange
F	Blue	Guava
G	Red	Papaya
H	Green	Watermelon

Three players play in team Blue.

=> Ans - (A)

#### Question 10

Which of the following combinations is incorrect ?

- A Blue - B - Apple
- B Red - A - Guava
- C Green D - Apple
- D Blue - C - Orange
- E All are incorrect

Answer: E

#### Explanation:

B plays with F in team Blue and he likes Mango.

None of those who play for either team Red or team Green likes either Guava or Banana, => B (mango), the one who likes guava and the one who likes banana play for team Blue.

=> Teams red and green have two players each.

G likes Papaya and A likes apple and they both play for team Red.

H likes Watermelon and he plays for team Green along with D.

The one who likes Orange does not play in team Red, => D likes orange.

C does not like Guava, => F likes Guava and C likes Banana.

Players	Teams	Fruits
A	Red	Apple
B	Blue	Mango
C	Blue	Banana
D	Green	Orange
F	Blue	Guava
G	Red	Papaya
H	Green	Watermelon

Clearly, all the given combinations are incorrect.

=> Ans - (E)

#### Question 11

Who likes Guava ?

- A B

- B F
- C D
- D Data inadequate
- E None of these

**Answer: B**

**Explanation:**

B plays with F in team Blue and he likes Mango.

None of those who play for either team Red or team Green likes either Guava or Banana, => B (mango), the one who likes guava and the one who likes banana play for team Blue.

=> Teams red and green have two players each.

G likes Papaya and A likes apple and they both play for team Red.

H likes Watermelon and he plays for team Green along with D.

The one who likes Orange does not play in team Red, => D likes orange.

C does not like Guava, => F likes Guava and C likes Banana.

Players	Teams	Fruits
A	Red	Apple
B	Blue	Mango
C	Blue	Banana
D	Green	Orange
F	Blue	Guava
G	Red	Papaya
H	Green	Watermelon

F likes Guava.

=> Ans - (B)

**Question 12**

**Which fruit does D like ?**

- A Banana
- B Guava
- C Orange
- D Papaya
- E None of these

**Answer: C**

**Explanation:**

B plays with F in team Blue and he likes Mango.

None of those who play for either team Red or team Green likes either Guava or Banana, => B (mango), the one who likes guava and the one who likes banana play for team Blue.

=> Teams red and green have two players each.

G likes Papaya and A likes apple and they both play for team Red.

H likes Watermelon and he plays for team Green along with D.

The one who likes Orange does not play in team Red, => D likes orange.

C does not like Guava, => F likes Guava and C likes Banana.

Players	Teams	Fruits
A	Red	Apple
B	Blue	Mango
C	Blue	Banana
D	Green	Orange
F	Blue	Guava
G	Red	Papaya
H	Green	Watermelon

D likes Orange.

=> Ans - (C)

### Instructions

Study the following information carefully and answer the questions given below:

Following are the conditions for selecting a Manager Finance in an organization.

The candidate must-

- be a graduate in any discipline with at least 50% marks.
- have completed Post Graduate Degree/Diploma in Management with specialization in Finance with at least 65% marks
- have post qualification work experience of at least 4 years in the finance department of all organization.
- be at least 26 years and not more than 36 years as on 01.12.2011.

In the case of a candidate who fulfils all the conditions except-

- at (ii) above, but has secured at least 60% marks in post-graduate degree/diploma in management with specialization in Finance and at least 70% marks in Graduation. his/her case is to be referred to DGM - Finance
- at (iii) above, but has post qualification work experience of at least two years as Assistant Finance Manager. his/her case is to be referred to GM-Finance.

In each question below, details of one candidate are provided. You have to take one of the following courses of action based on the conditions given above and the information provided in each question and mark the number of that course of action as your answer. You are not to assume anything other than the information provided in each question. All these cases are given to you as on 01.12.2011.

Mark answer (1) if the candidate is to be selected.

Mark answer (2) if the data provided are inadequate to take a decision.

Mark answer (3) if the candidate is not to be selected.

Mark answer (4) if the case is to be referred to DGM-Finance.

Mark answer (5) if the case is to be referred to GM-Finance.

Now read the information provided in each question and mark your answer accordingly.

### Question 13

**Raman Sharma was born on 19th March 1981. He has been working in the finance department of an organization for the past six years. He has secured 65% marks in B.Com. and 75% marks in his post graduate degree in management with finance specialization.**

- if the candidate is to be selected.
- if the data provided are inadequate to take a decision.
- if the candidate is not to be selected.
- if the case is to be referred to DGM-Finance.
- if the case is to be referred to GM-Finance.

**Answer: A**

### Explanation:

(i) : Marks in graduation  $\geq 50\%$  = YES (65%)

(ii) : Marks in post graduation/diploma in Finance  $\geq 65\%$  = YES (75%)



(iii) : Work experience in finance department  $\geq 4$  years = YES (6 years)

(iv) : Age  $\leq 36$  years = YES

Since, the candidate has fulfilled all the eligibility criteria, thus the candidate is to be selected.

=> Ans - (A)

#### Question 14

**Bhuvan Sen was born on 7th November 1982. He has been working for the past four years as Assistant Finance Manager in an organization after completing his post graduate degree in Finance management with 66% marks. He has secured 52% marks in B.Sc.**

A if the candidate is to be selected.

B if the data provided are inadequate to take a decision.

C if the candidate is not to be selected.

D if the case is to be referred to DGM-Finance.

E if the case is to be referred to GM-Finance.

**Answer: A**

#### Explanation:

(i) : Marks in graduation  $\geq 50\%$  = YES (52%)

(ii) : Marks in post graduation/diploma in Finance  $\geq 65\%$  = YES (66%)

(iii) : Work experience in finance department  $\geq 4$  years = YES

(iv) : Age  $\leq 36$  years = YES

Since, the candidate has fulfilled all the eligibility criteria, thus the candidate is to be selected.

=> Ans - (A)

#### Question 15

**Gyatri Devi has been working in the finance department of an organization for the past seven years after completing her post graduate degree in management with specialization in Finance with 62% marks. She has secured 75% marks in B.Sc. She was born on 12th January 1983.**

A if the candidate is to be selected.

B if the data provided are inadequate to take a decision.

C if the candidate is not to be selected.

D if the case is to be referred to DGM-Finance.

E if the case is to be referred to GM-Finance.

**Answer: D**

#### Explanation:

(i) : Marks in graduation  $\geq 50\%$  = YES (75%)

(ii) : Marks in post graduation/diploma in Finance  $\geq 65\%$  = NO (62%)

(iii) : Work experience in finance department  $\geq 4$  years = YES

(iv) : Age  $\leq 36$  years = YES

The candidate failed to score more than 65% in post graduation but, she scored more than 60% in post graduation and more than 70% in graduation.

Thus, the candidate is to be referred to DGM-Finance.

=> Ans - (D)

**Question 16**

Ranjana Singh was born on 26th July 1984. She has been working as Assistant Finance Manager for the past three years in an organization after completing her Post Graduate Diploma in Management with finance specialization with 68% marks. She has secured 55% marks in B.A.

- A if the candidate is to be selected.
- B if the data provided are inadequate to take a decision.
- C if the candidate is not to be selected.
- D if the case is to be referred to DGM-Finance.
- E if the case is to be referred to GM-Finance.

**Answer: E**

**Explanation:**

- (i) : Marks in graduation  $\geq 50\%$  = YES (55%)
- (ii) : Marks in post graduation/diploma in Finance  $\geq 65\%$  = YES (68%)
- (iii) : Work experience in finance department  $\geq 4$  years = NO
- (iv) : Age  $\leq 36$  years = YES

The candidate does not have work experience of more than 4 years but, she has been working as assistant finance manager for more than 2 years.

Thus, the candidate is to be referred to GM-Finance.

=> Ans - (E)

**Question 17**

Ajay Roy has been working in the Finance department of an organization for the past five years after completing his post graduate degree in management with finance specialization with 60% marks. He has secured 60% marks in B.Com. He was born on 4th November 1985.

- A if the candidate is to be selected.
- B if the data provided are inadequate to take a decision.
- C if the candidate is not to be selected.
- D if the case is to be referred to DGM-Finance.
- E if the case is to be referred to GM-Finance.

**Answer: C**

**Explanation:**

- (i) : Marks in graduation  $\geq 50\%$  = YES (60%)
- (ii) : Marks in post graduation/diploma in Finance  $\geq 65\%$  = NO (60%)
- (iii) : Work experience in finance department  $\geq 4$  years = YES
- (iv) : Age  $\leq 36$  years = YES

The candidate failed to secure more than 65% marks in post graduation, moreover he scored less than 70% in graduation.

Thus, the candidate is not to be selected.

=> Ans - (C)

## Instructions

Study the following information carefully and answer the given questions.

Seven flights namely Jet Airways, British Airways, Delta, Quantas, Emirates, Lufthansa, Air India are scheduled to fly to London. There is only one flight to London on each of the seven days of the week, starting from Monday and ending on Sunday.

Delta flies on Wednesday. Air India flies the day next to British Airways. British Airways does not fly on Monday or Friday. Two airlines fly between the days British Airways and Emirates fly. Quantas flies a day before Lufthansa. Emirates doesn't fly on Sunday.

### Question 18

On which of the following days does Jet Airways fly ?

- A Friday
- B Sunday
- C Tuesday
- D Thursday
- E None of these

**Answer: C**

### Explanation:

Delta flies on Wednesday and Air India flies the day next to British Airways.

British Airways does not fly on Monday or Friday, => Let British Airways flies on Thursday, thus Air India flies on Friday.

Two airlines fly between the days British Airways and Emirates fly and Emirates does not fly on Sunday, => Emirates flies on Monday.

Quantas flies a day before Lufthansa, => Quantas flies on Saturday and Lufthansa flies on Sunday.

Days	Flights
Monday	Emirates
Tuesday	Jet Airways
Wednesday	Delta
Thursday	British Airways
Friday	Air India
Saturday	Quantas
Sunday	Lufthansa

Jet Airways flies on Tuesday.

=> Ans - (C)

### Question 19

How many flights fly between Lufthansa and Delta ?

- A None
- B One
- C Two
- D Three
- E Five

**Answer: D**

### Explanation:

Delta flies on Wednesday and Air India flies the day next to British Airways.

British Airways does not fly on Monday or Friday, => Let British Airways flies on Thursday, thus Air India flies on Friday.

Two airlines fly between the days British Airways and Emirates fly and Emirates does not fly on Sunday, => Emirates flies on Monday.

Quantas flies a day before Lufthansa, => Quantas flies on Saturday and Lufthansa flies on Sunday.

Days	Flights
Monday	Emirates
Tuesday	Jet Airways
Wednesday	Delta
Thursday	British Airways
Friday	Air India
Saturday	Quantas
Sunday	Lufthansa

There are 3 flights that fly between Lufthansa and Delta.

=> Ans - (D)

#### Question 20

Which of the following flights flies on Friday ?

- A Air India
- B Quantas
- C Emirates
- D Lufthansa
- E Jet Airways

Answer: A

#### Explanation:

Delta flies on Wednesday and Air India flies the day next to British Airways.

British Airways does not fly on Monday or Friday, => Let British Airways flies on Thursday, thus Air India flies on Friday.

Two airlines fly between the days British Airways and Emirates fly and Emirates does not fly on Sunday, => Emirates flies on Monday.

Quantas flies a day before Lufthansa, => Quantas flies on Saturday and Lufthansa flies on Sunday.

Days	Flights
Monday	Emirates
Tuesday	Jet Airways
Wednesday	Delta
Thursday	British Airways
Friday	Air India
Saturday	Quantas
Sunday	Lufthansa

Air India flies on Friday.

=> Ans - (A)

#### Question 21

If Delta postpones its flight to Sunday owing to some technical reasons and all the flights scheduled for Thursday to Sunday are now made to take off a day ahead of the schedule, which of the following flights would now fly on Friday?

- A Lufthansa
- B Jet Airways
- C British Airways
- D Air India
- E Quantas

**Answer:** E

**Explanation:**

Delta flies on Wednesday and Air India flies the day next to British Airways.

British Airways does not fly on Monday or Friday, => Let British Airways flies on Thursday, thus Air India flies on Friday.

Two airlines fly between the days British Airways and Emirates fly and Emirates does not fly on Sunday, => Emirates flies on Monday.

Quantas flies a day before Lufthansa, => Quantas flies on Saturday and Lufthansa flies on Sunday.

Days	Flights
Monday	Emirates
Tuesday	Jet Airways
Wednesday	Delta
Thursday	British Airways
Friday	Air India
Saturday	Quantas
Sunday	Lufthansa

After the rearrangement, the flight which was originally supposed to fly on Saturday will now fly on Friday, i.e. Quantas.

=> Ans - (E)

**Question 22**

If Emirates is related to British Airways and Delta is related to Quantas in a certain way based upon the given flight schedule, then Jet Airways will be related to which of the following based upon the same relationship ?

- A Lufthansa
- B Quantas
- C Delta
- D Air India
- E None of these

**Answer:** D

**Explanation:**

Delta flies on Wednesday and Air India flies the day next to British Airways.

British Airways does not fly on Monday or Friday, => Let British Airways flies on Thursday, thus Air India flies on Friday.

Two airlines fly between the days British Airways and Emirates fly and Emirates does not fly on Sunday, => Emirates flies on Monday.

Quantas flies a day before Lufthansa, => Quantas flies on Saturday and Lufthansa flies on Sunday.

Days	Flights
Monday	Emirates
Tuesday	Jet Airways
Wednesday	Delta
Thursday	British Airways
Friday	Air India
Saturday	Quantas
Sunday	Lufthansa

Emirates is related to British Airways, => British Airways flies three days after Emirates.

Delta is related to Quantas, => Quantas flies three days after Delta.

Similarly, Air India flies three days after Jet Airways, => Jet Airways is related to Air India.

=> Ans - (D)

### Instructions

Directions: Study the information and answer the following questions.

In a certain code language 'economics is not money' is written as 'ka la ho ga', 'demand and supply economics' is written as 'mo ta pa ka', 'money makes only part' is written as 'zi la ne ki' and 'demand makes supply economics' is written as 'zi mo ka ta'.

### Question 23

What is the code for 'money' in the given code language?

- A ga
- B mo
- C pa
- D ta
- E la

Answer: E

### Explanation:

Money is repeated in two sentences where la is common. So option e : la is the correct answer.

### Question 24

What is the code for 'supply' in the given code language?

- A Only ta
- B Only mo
- C Either pa or mo
- D Only pa
- E Either mo or ta

Answer: E

### Explanation:

economics is repeated in two sentences where ka is common.

So economics is ka.

demand and supply are repeated in two sentences where mo and ta are common, and can be either of them( if demand is mo then supply is ta and vice versa).

Hence option e : Either mo or ta is the correct answer.

**Question 25**

**What may be the code for 'demand only more' in the given code language?**

- A xi ne mo
- B mo zi ne
- C ki ne mo
- D mo zi ki
- E xi ka ta

**Answer: A**

**Explanation:**

demand is either mo or ta

makes is repeated in two sentences where zi is common

money is la

Therefore only can be either ne or ki

So the option must have wither mo or ta , ne or ki and a new word for only.

Verifying the options with the above condition we find that option a : xi ne mo is the right answer.

**Question 26**

**What may be the possible code for 'work and money' in the given code language?**

- A pa ga la
- B pa la tu
- C mo la pa
- D tu la ga
- E pa la ne

**Answer: B**

**Explanation:**

From the given information, we can establish that economics = 'ka', 'money = 'la', and = 'pa' and makes = 'zi'.

'Work and money' contain the words 'and' and 'money' => answer must have 'pa' and 'la' in it => Both option 1 and 2 contain them.

But in option 1, 'ga', which refers to either 'is' or 'not', is present. But in the given sentence, neither of them are present. Hence option 1 is wrong.

=> option 2 is correct

**Question 27**

**What is the code for 'makes' in the given code language?**

- A mo
- B pa
- C ne
- D zi
- E ho

**Answer: D**

**Explanation:**

'money makes only part' and 'Demand makes supply economics' have only 'makes' in common. Hence 'zi', which is the only common word common, is the answer.

**Instructions**

In each of the question below are given three statements followed by two conclusion numbered I and II. You have to take the given statements to be true even if they seem to at variance from commonly known facts and then decide which of given conclusion logically follows from the statements disregarding commonly known facts Give answers--

- A If only conclusion I follows
- B If only conclusion II follows
- C If either conclusion I or conclusion II follows
- D If neither conclusion I nor conclusion II follows
- E If both conclusion I and II follows

**Question 28**

**statements:**

**some casual are formal.**

**All formal are expensive.**

**All expensive are elegant.**

**Conclusion:**

**I.All formal are elegant**

**II.Some casual are expensive**

- A If only conclusion I follows
- B If only conclusion II follows
- C If either conclusion I or conclusion II follows
- D If neither conclusion I nor conclusion II follows
- E If both conclusion I and II follows

**Answer: E**

**Explanation:**

Some casual are formal.

All formal are expensive. Hence, some casuals are expensive.

All expensive are elegant. Hence, all formals are elegant and some casuals are elegant.

Therefore, both I and II follow.

**Question 29**

**Statements:**

**All roses are red.**

**Some red are colour.**

**All colour are paints.**

**Conclusion:**

**I. Some red are paints.**

**II. All red are roses.**

- A If only conclusion I follows
- B If only conclusion II follows
- C If either conclusion I or conclusion II follows
- D If neither conclusion I nor conclusion II follows

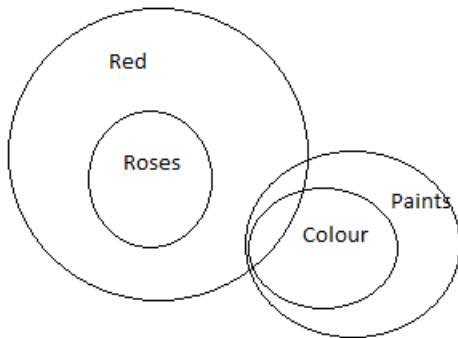


E If both conclusion I and II follows

**Answer: A**

**Explanation:**

The data can be interpreted in syllogisms form as:



Some red are paints. This conclusion can be drawn as apparent from Venn diagram.

All red are roses. This is obviously a wrong conclusion.

Hence, only I follows.

### Question 30

**statements:**

**All towns are cities.**

**All cities are urban.**

**Some urban are rural.**

**Conclusion: I. Some towns are rural.**

**II. All rural are towns.**

A If only conclusion I follows

B If only conclusion II follows

C If either conclusion I or conclusion II follows

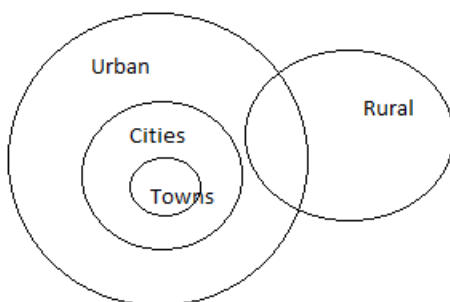
D If neither conclusion I nor conclusion II follows

E If both conclusion I and II follows

**Answer: D**

**Explanation:**

The data can be interpreted in Venn diagram from as:



Some towns are rural. We cannot say this with surety and this conclusion can be contradicted.

All rural are towns. This definitely cannot be concluded from Venn diagram.

Hence, both conclusion I and II do not follow.

**Question 31**

**statements:**

**All medicines are tablets.**

**Some tablets are tonics.**

**Some tonics are bitter.**

**Conclusion:**

**I. Some tablets are bitter.**

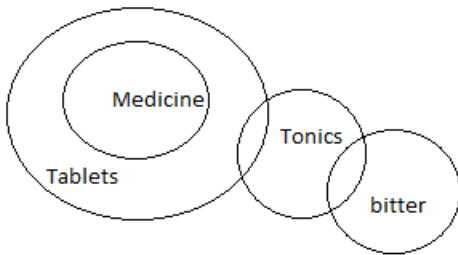
**II. No medicines is a tonic.**

- A If only conclusion I follows
- B If only conclusion II follows
- C If either conclusion I or conclusion II follows
- D If neither conclusion I nor conclusion II follows
- E If both conclusion I and II follows

**Answer: D**

**Explanation:**

Data can be interpreted in Venn diagram form as:



Some tablets are bitter. This conclusion cannot be drawn from the Venn diagram.

No medicines is a tonic. This conclusion also cannot be drawn.

Both I and II do not follow.

Option D is correct option.

**Question 32**

**statements:**

**All incomes are salaries.**

**Some salaries are perks .**

**Some perks are tangible.**

**Conclusion:**

**I. Some incomes are tangible.**

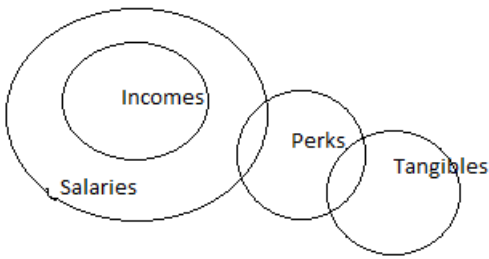
**II. At least some perks are salaries.**

- A If only conclusion I follows
- B If only conclusion II follows
- C If either conclusion I or conclusion II follows
- D If neither conclusion I nor conclusion II follows
- E If both conclusion I and II follows

**Answer: B**

**Explanation:**

Data can be interpreted in Venn diagram form as:



Some incomes are tangible. The income and tangibles are disjoint sets. Hence, conclusion drawn is incorrect.

At least some perks are salaries. This conclusion is correct. There is intersection between perks and salaries set.

### Instructions

For the following questions answer them individually

### Question 33

In a row of 40 boys Sameer was shifted 10 places to the right of Raman and Kailash was shifted 10 places to the left of Vikas. If Vikas was 26th from the left end and there were three boys between Kailash and Sameer after Shifting, what was the position of Raman in the row ?

- A Data inadequate
- B 10th from the left end
- C 10th from the right end
- D 39th from the right end
- E None of these

Answer: A

### Explanation:

All positions in this question will be from left end.

Total students in the row = 40

Vikas's position = 26

Since, Kailash was shifted 10 places to the left of Vikas => Kailash position = 16

Three boys were sitting between Kailash and Sameer => Sameer's position = 12 or 20

Sameer was 10 places to the right of Raman.

=> Raman's position = 2 or 10

Thus, not sufficient data is given.

### Instructions

Study the following information carefully to answer these questions.

'A \$ B' means 'A is wife of B'

'A # B' means 'A is son of B'

'A % B' means 'A is father of B'

'A \* B' means 'A is sister of B'

### Question 34

Which of the following expressions represents the relationship 'T is brother of H' ?

- A H\*T%K

- B T\*H%K
- C H#K%T
- D H\*K%T
- E None of these

**Answer: A**

**Explanation:**

(A) : H\*T%K = H is sister of T and T is father of K, => T is male

=> T is brother of H

(B) : T\*H%K = T is sister of H, who is father of K

=> T is sister of H

(C) : H#K%T = H is the son of K and K is also father of T, => gender of T is unknown

=> T can be either brother or sister of H

(D) : H\*K%T = H is sister of K, who is father of T

=> T is either nephew or niece of H

Ans - (A)

**Question 35**

In H\*T#F%L, how is H related to L ?

- A Cousin
- B Brother
- C Sister
- D Cannot be determined
- E None of these

**Answer: C**

**Explanation:**

In H\*T#F%L

H is sister of T, who is son of F.

F is father of L, => H(female), T(male) & L are siblings.

=> H is **sister** of L

**Question 36**

Which of the following expression represent the relationship 'R is mother of J' ?

- A M\*J#K\$R
- B M\*R\$K%J
- C J#R#T
- D R\$K%M\$J
- E None of these

**Answer: B**

**Explanation:**

(A) : M\*J#K\$R = M is the sister of J, who is son of K. K is the wife of R

=> R is father of J

(B) : M\*R\$K%J = M is sister of R, who is wife of K. K is father of J

=> R is mother of J

(C) : J#R#T = J is son of R, who is son of T

=> R is father of J

(D) : R\$K%M\$J = R is wife of K, who is father of M. M is wife of J.

=> R is mother-in-law of J.

Ans - (B)

**Instructions**

Study the given information and answer the given questions.

Point A is 11 m North of point B.

Point C is 11 m East of point B

Point D is 6 m North of point C

Point E is 7 m West of point D

Point F is 8 m North of point E

Point G is 4 m West of point F

**Question 37**

What is the shortest distance between point F from point A ?

A 43m

B 4 m

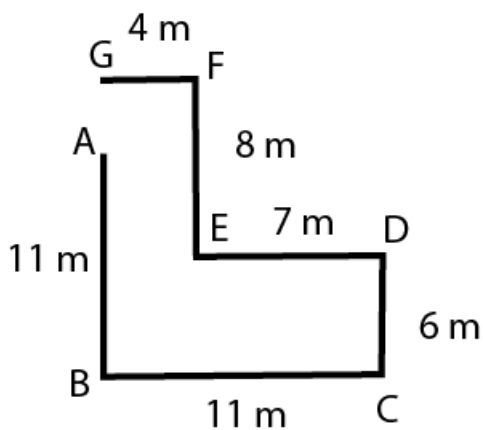
C 3 m

D 7 m

E 5 m

Answer: E

Explanation:



$$AF^2 = 4^2 + 3^2$$

AF = 5

According to the above diagram, shortest distance between F and A will be 5 m. Hence, answer will be E

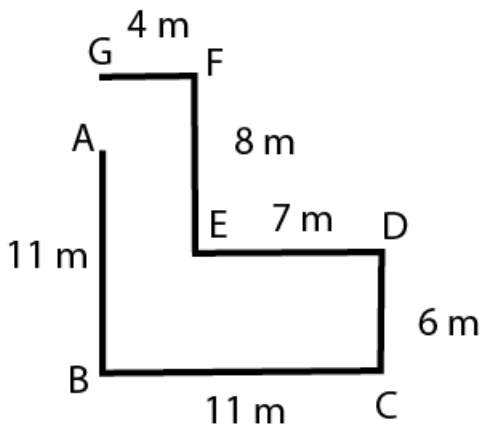
**Question 38**

How far and in which direction is point G from point A ?

- A 3 m North
- B 5 m North
- C 4 m North
- D 4 m South
- E 3 m South

Answer: A

Explanation:



As we can see in the above diagram that distance between G and A will be  $8 - (11 - 6) = 3$  m

Hence, answer will be A

**Instructions**

Study the following information carefully and answer the questions given below :

In a certain code language,

'always follow your passion' is written as 'ke ag mo jp'.

'great passion for music' is written as 'mo bu sc nd'.

'music always on mind' is written as 'fi sc ag lw'.

'follow music on twitter' is written as 'ty jp fi Sc'.

(All codes are two-letter codes only)

**Question 39**

What may be the possible code for 'divine passion' in the given code language?

- A mo ag
- B bu mo
- C xy ag

D xy bu

E mo xy

**Answer:** E

**Explanation:**

From I & II, there is only one common word, i.e., 'passion' coded as 'mo'

The word divine is not used in above statements.

Thus, we need to find an answer that contains a code which is not used yet and 'mo'

Ans - (E)

**Instructions**

For the following questions answer them individually

**Question 40**

In a certain code language 'they have come back' is written as 'na ja sa da' and 'they have gone there' is written as 'da ka pa na', How is 'come' written in that code language ?

A sa

B na

C ja

D sa or ja

E Data inadequate

**Answer:** D

**Explanation:**

The common words in both the statements are 'they' or 'have' coded as = either 'na' or 'da'

Thus, one of the remaining word left in 1st statement is 'come' coded as = sa or ja

=> Ans - (D)

## Quant

**Instructions**

In each of the following questions, two equations numbered I and II are given. You have to solve both the equations and select the appropriate option.

Give answer If

a:  $x > y$

b:  $x \leq y$

c:  $x \geq y$

d:  $x < y$

e: Relationship between x and y cannot be established

**Question 41**

I.  $x^2 - x - 12 = 0$

II.  $y^2 + 4y + 4 = 0$

A  $x > y$

B  $x \leq y$

C  $x \geq y$

D  $x < y$

E Relationship between x and y cannot be established

**Answer: E**

**Explanation:**

I.  $x^2 - x - 12 = 0$

$\Rightarrow x^2 - 4x + 3x - 12 = 0$

$\Rightarrow x(x - 4) + 3(x - 4) = 0$

$\Rightarrow (x - 4)(x + 3) = 0$

$\Rightarrow x = 4, -3$

II.  $y^2 + 4y + 4 = 0$

$\Rightarrow y^2 + 2y + 2y + 4 = 0$

$\Rightarrow y(y + 2) + 2(y + 2) = 0$

$\Rightarrow (y + 2)(y + 2) = 0$

$\Rightarrow y = -2, -2$

Because  $4 > -2$  and  $-2 > -3$

$\therefore$  No relation can be established.

**Question 42**

I.  $2x^2 - 15x + 27 = 0$

II.  $2y^2 - 23y + 63 = 0$

A  $x > y$

B  $x \leq y$

C  $x \geq y$

D  $x < y$

E Relationship between x and y cannot be established

**Answer: B**

**Explanation:**

I.  $2x^2 - 15x + 27 = 0$

$\Rightarrow 2x^2 - 6x - 9x + 27 = 0$

$\Rightarrow 2x(x - 3) - 9(x - 3) = 0$

$\Rightarrow (x - 3)(2x - 9) = 0$

$\Rightarrow x = 3, \frac{9}{2}$

II.  $2y^2 - 23y + 63 = 0$

$\Rightarrow 2y^2 - 14y - 9y + 63 = 0$

$\Rightarrow 2y(y - 7) - 9(y - 7) = 0$

$\Rightarrow (y - 7)(2y - 9) = 0$

$\Rightarrow y = 7, \frac{9}{2}$

$\therefore x \leq y$



**Question 43**

I.  $x^2 + 11x + 28 = 0$

II.  $5y^2 + 27y + 28 = 0$

A  $x > y$

B  $x \leq y$

C  $x \geq y$

D  $x < y$

E Relationship between x and y cannot be established

**Answer: B**

**Explanation:**

I.  $x^2 + 11x + 28 = 0$

$\Rightarrow x^2 + 7x + 4x + 28 = 0$

$\Rightarrow x(x + 7) + 4(x + 7) = 0$

$\Rightarrow (x + 7)(x + 4) = 0$

$\Rightarrow x = -7, -4$

II.  $5y^2 + 27y + 28 = 0$

$\Rightarrow 5y^2 + 20y + 7y + 28 = 0$

$\Rightarrow 5y(y + 4) + 7(y + 4) = 0$

$\Rightarrow (y + 4)(5y + 7) = 0$

$\Rightarrow y = -4, -\frac{7}{5}$

$\therefore x \leq y$

**Question 44**

I.  $x^2 - 11x + 30 = 0$

II.  $y^2 - 15y + 56 = 0$

A  $x > y$

B  $x \leq y$

C  $x \geq y$

D  $x < y$

E Relationship between x and y cannot be established

**Answer: D**

**Explanation:**

I.  $x^2 - 11x + 30 = 0$

$\Rightarrow x^2 - 6x - 5x + 30 = 0$

$\Rightarrow x(x - 6) - 5(x - 6) = 0$

$\Rightarrow (x - 6)(x - 5) = 0$

$\Rightarrow x = 5, 6$

$$\text{II. } y^2 - 15y + 56 = 0$$

$$\Rightarrow y^2 - 8y - 7y + 56 = 0$$

$$\Rightarrow y(y - 8) - 7(y - 8) = 0$$

$$\Rightarrow (y - 8)(y - 7) = 0$$

$$\Rightarrow y = 7, 8$$

Therefore  $x < y$

**Question 45**

I.  $3x^2 + 16x + 21 = 0$

II.  $2y^2 + 15y + 25 = 0$

A  $x > y$

B  $x \leq y$

C  $x \geq y$

D  $x < y$

E Relationship between  $x$  and  $y$  cannot be established

**Answer: E**

**Explanation:**

I.  $3x^2 + 16x + 21 = 0$

$$\Rightarrow 3x^2 + 9x + 7x + 21 = 0$$

$$\Rightarrow 3x(x + 3) + 7(x + 3) = 0$$

$$\Rightarrow (x + 3)(3x + 7) = 0$$

$$\Rightarrow x = -3, \frac{-7}{3}$$

II.  $2y^2 + 15y + 25 = 0$

$$\Rightarrow 2y^2 + 10y + 5y + 25 = 0$$

$$\Rightarrow 2y(y + 5) + 5(y + 5) = 0$$

$$\Rightarrow (y + 5)(2y + 5) = 0$$

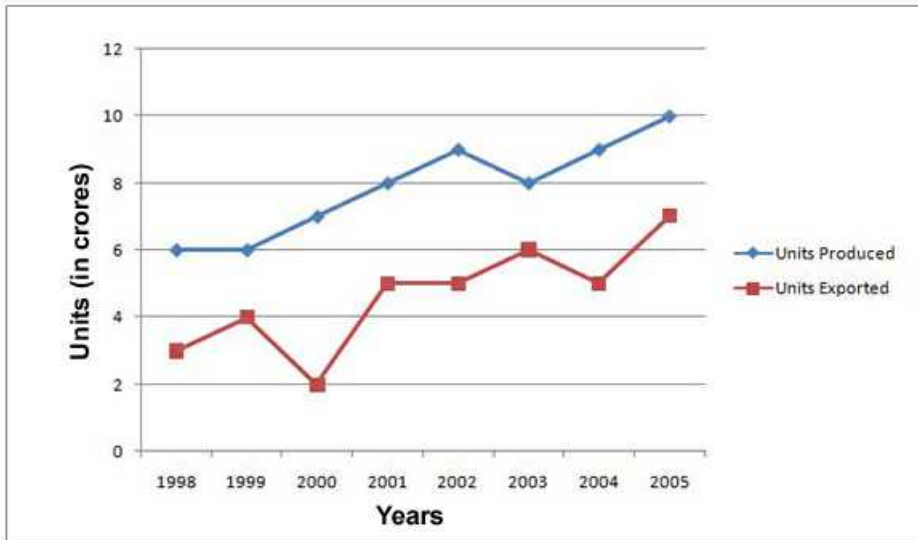
$$\Rightarrow y = -5, \frac{-5}{2}$$

$\therefore$  No relation can be established.

**Instructions**

Study the following graph to answer the given questions.

No of units produced (in crores) and exported (in crores) by a company over the years.



Question 46

In which year is the percentage rise in units produced from the preceding year the maximum ?

- A 2005
- B 2004
- C 2001
- D 2000
- E None of these

Answer: D

Explanation:

The percent rise =  $100 \times \frac{\text{Increase in value}}{\text{original value}}$  = Increase in value by one crore is seen in many years. But the denominator (original value) is the least in 2000. So, the percent rise is highest in 2000.

Question 47

What is the difference between the number of units exported in 1999 and 2000 ?

- A 20000000
- B 200000000
- C 2000000
- D 200000
- E None of these

Answer: A

Explanation:

Number of units exported in 1999 = 4 crores

Number of units exported in 2000 = 2 crores.

So, the difference = 2 crores = 2,00,00,000

**Question 48**

What is the average number of units exported over the years ?

- A 27857000
- B 462500000
- C 46250000
- D 278570000
- E None of these

**Answer: C**

**Explanation:**

The average number of units exported = Sum of the exports/ Total number of years =  $(3 + 4 + 2 + 5 + 5 + 6 + 5 + 7)/8$   
= 4.625 crores = 4,62,50,000

**Question 49**

In which year is the per cent of units exported to the units produced the maximum?

- A 2005
- B 2003
- C 2001
- D 1999
- E None of these

**Answer: B**

**Explanation:**

The required percentage =  $100 * \text{Number of units exported} / \text{Number of units imported}$

For 1998, it is:  $100 * 3/6 = 50\%$

For 1999, it is:  $100 * 4/6 = 66.67\%$

For 2000, it is:  $100 * 2/7 = 28.57\%$

For 2001, it is:  $100 * 5/8 = 62.5\%$

For 2002, it is:  $100 * 5/9 = 55.56\%$

For 2003, it is:  $100 * 6/8 = 75\%$

For 2004, it is:  $100 * 5/9 = 55.56\%$

For 2005, it is:  $100 * 7/10 = 70\%$

So, it is maximum in 2003.

**Question 50**

In which year is the difference between the units produced and exported the maximum ?

- A 2002
- B 2004
- C 2005

- D 2001
- E None of these

**Answer: E**

**Explanation:**

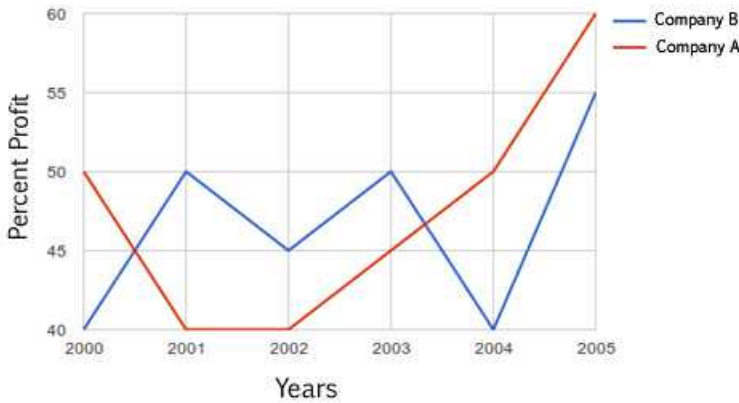
The difference is maximum in the year 2000, when the difference was  $7 - 2 = 5$  crores

**Instructions**

Study the following graph carefully and answer questions given below it.

$$\text{Percent Profit} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} * 100$$

**Percentage profit earned by two companies A and B over the years.**



**Question 51**

Total expenditure of Company A in all the years together was Rs. 128.5 lakhs. What was the total income of the Company in all the years together ?

- A Rs. 147.5 lakhs
- B Rs. 153 lakhs
- C Rs. 189.5 lakhs
- D Rs. Cannot be determined
- E None of these

**Answer: D**

**Explanation:**

We can calculate the income of a particular year from the expenditure by using the formula  $\% \text{ profit} = \frac{\text{Income} - \text{Expenditure}}{\text{Expenditure}} * 100$

But we can't calculate the total income over many years with the total expenditure as the % profit is different for each year.

**Question 52**

Ratio of expenditure of Companies A and B in 2003 was 4 : 5 respectively. What was the respective ratio of their incomes in that year ?

- A 10 : 29
- B 20 : 29
- C 9 : 10
- D 21 : 26

E None of these

Answer: E

**Explanation:**

Let IA be A's income and IB be B's income.

Also let  $4x$  be A's expenditure and  $5x$  be B's expenditure.

From the given formula, For A, % profit =  $100 * (IA - 4x) / 4x$

$$.45 = (IA - 4x) / 4x \Rightarrow IA = 4x(1.45)$$

For B,

$$\% \text{ profit} = 100 * (IB - 5x) / 5x \Rightarrow .5 = (IB - 5x) / 5x$$

$$\text{So } IB = 5x(1.5)$$

$$\text{So the ratio} = 4 * 1.45 : 5 * 1.5 = 5.8 : 7.5 = 58 : 75$$

**Question 53**

If the expenditure of Companies A and B in 2001 were equal and the total income of the two companies was Rs. 116 lakhs, what was the total expenditure of the two companies in that year ?

A Rs. 65 lakhs

B Rs. 80 lakhs

C Rs. 42 lakhs

D Cannot be determined

E None of these

Answer: B

**Explanation:**

Let the income of A be  $I$  and the expenditure of each company be  $x$ .

$$\text{So, income of B} = 116 - I$$

Based on the the formula, For A, % profit =  $100 * (\text{Income} - \text{Expenditure}) / \text{Expenditure}$

$$40\% = (I - x) / x \Rightarrow I = 1.4x$$

For B, % profit =  $100 * (\text{Income} - \text{Expenditure}) / \text{Expenditure}$

$$\Rightarrow 50\% = (116 - I - x) / x \Rightarrow 116 - I = 1.5x$$

$$116 - 1.4x = 1.5x$$

$$\text{So, } x = 116 / 2.9 = 40$$

$$\text{Total expenditure} = 2x = 80 \text{ lakhs}$$

**Question 54**

If the incomes of Company B in 2002 and 2003 were in the ratio of 3 : 4 respectively. What was the respective ratio of expenditures of that company in these two years ?

A 29 : 45

B 29 : 56

C 45 : 58

D 56 : 29

E None of these

**Answer: C**

**Explanation:**

Let the incomes in 2002 and 2003 be  $3x$  and  $4x$  respectively and expenditures be  $E_1$  and  $E_2$ .

In 2002, % profit =  $100 * (I-E)/E$

$$\Rightarrow .45 = (3x - E_1)/E_1$$

$$\text{So, } 3x = 1.45E_1$$

In 2003, % profit =  $100 * (I-E)/E$

$$\Rightarrow .5 = (4x - E_2)/E_2$$

$$4x = 1.5 E_2$$

$$\text{So, } E_1 : E_2 = 3/1.45 : 4/1.5 = 4.5 : 5.8$$

**Question 55**

Expenditures of Company A in 2004 and 2005 are Rs. 12 lakhs and Rs. 14.5 lakhs respectively. What was the total income of Company A in 2004 and 2005 together (in lakh Rs. )

- A 41.2
- B 38.5
- C 44.6
- D 36.9
- E None of these

**Answer: A**

**Explanation:**

We use the formula, % profit =  $(I - E)/E$

In 2004, % profit = 50%

$$\text{So, } .5 = (I - E)/E \Rightarrow I = 1.5 E = 1.5 * 12 = 18 \text{ lakhs.}$$

In 2005, % profit = 60%

$$\text{So, } .6 = (I - E)/E \Rightarrow I = 1.6 E = 1.6 * 14.5 = 23.2 \text{ lakhs}$$

$$\text{So, total} = 18 + 23.2 = 41.2 \text{ lakhs}$$

**Instructions**

Find the wrong number in given series sequence.

**Question 56**

**1, 4, 15, 64, 325, 1955**

- A 15
- B 64
- C 325
- D 1955
- E None of these

**Answer: D**

**Explanation:**

$$4 = 1 \cdot 2 + 2; 15 = 4 \cdot 3 + 3; 64 = 15 \cdot 4 + 4; 325 = 64 \cdot 5 + 5; 1956 = 325 \cdot 6 + 6$$

The  $n$ th term is of the form,

$$T_n = (T_{n-1} \times n) + n$$

The last term does not follow the pattern and is thus the wrong number in the sequence.

**Question 57**

**6, 12, 21, 33, 49, 66**

- A 21
- B 33
- C 49
- D 66
- E None of these

**Answer: C**

**Explanation:**

$$6 + 6 = 12$$

$$12 + 9 = 21$$

$$21 + 12 = 33$$

$$33 + 15 = 48$$

$$48 + 18 = 66.$$

Hence, 49 is wrong number and it should be 48.

**Question 58**

**6, 11.5, 19, 28.5, 41**

- A 6
- B 11.5
- C 41
- D 28.5
- E None of these

**Answer: C**

**Explanation:**

$$1.5 \cdot 2 + 3 = 6$$

$$2.5 \cdot 3 + 4 = 11.5$$

$$3.5 \cdot 4 + 5 = 19$$

$$4.5 \cdot 5 + 6 = 28.5$$

$$5.5 \cdot 6 + 7 = 40$$

**Question 59**

**5, 26, 82, 214, 401, 702**

- A 26
- B 82



- C 214
- D 401
- E None of these

**Answer: C**

**Explanation:**

$1 \times 2 + 3 = 5$ ;  $4 \times 5 + 6 = 26$ ;  $8 \times 9 + 10 = 82$ ;  $13 \times 14 + 15 = 212$ ;  $19 \times 20 + 21 = 401$ ;  $26 \times 27 + 28 = 702$

All the numbers except 214 are following a pattern of  $n \times (n + 1) + (n + 2)$ . Hence, 214 is wrong number.

**Question 60**

**5,20,73,274,1049**

- A 20
- B 73
- C 274
- D 1049
- E None of these

**Answer: C**

**Explanation:**

$1^2 + 4 = 5$ ;  $2^2 + 16 = 20$ ;  $3^2 + 64 = 73$ ;  $4^2 + 256 = 272$ ;  $5^2 + 1024 = 1049$

**Instructions**

What should come in place of the question mark (?) in the following question ?

**Question 61**

**6389-1212-2828= ?**

- A 2349
- B 2493
- C 2934
- D 2393
- E None of these

**Answer: A**

**Explanation:**

Now,  $1212 + 2828 = 4040$

Therefore,  $6389 - 4040 = 2349$

**Question 62**

$\frac{31}{43} \times \frac{86}{95} \times \frac{41}{93} = ?$

- A  $\frac{82}{267}$
- B  $\frac{82}{283}$

C  $\frac{83}{265}$

D  $\frac{82}{285}$

E None of these

**Answer: D**

**Explanation:**

$$43 \times \frac{31}{93} \times \frac{86}{43} \times \frac{41}{93} = ?$$

Can be rewritten as,

$$\frac{31}{93} \times \frac{86}{43} \times \frac{41}{93}$$

which solves out to be,

$$\frac{1}{3} \times \frac{2}{1} \times \frac{41}{93}$$

And hence, the answer is,

$$\frac{82}{285}$$

**Question 63**

$$526 \times 12 + 188 = 50 \times ?$$

A 120

B 160

C 140

D 110

E None of these

**Answer: E**

**Explanation:**

$$526 \times 12 = 6312$$

$$6312 + 188 = 6500$$

Let the number in the question mark be X.

$$\text{So, } X \times 50 = 6500$$

$$X = 130$$

**Question 64**

$$62^2 - 32^2 + (?^2) = 3144$$

A 17

B 16

C 19

D 15

E None of these

Answer: E

**Explanation:**

The question can be reframed as,

$$3144 - 62^2 + 32^2 = (?^2)$$

$$3144 - 3844 + 1024 = 324$$

But,

$$18^2 = 324$$

And hence, none of the above is option.

**Question 65**

$$\sqrt[3]{21952} + 33 = ?$$

- A 58
- B 61
- C 63
- D 53
- E None of these

Answer: B

**Explanation:**

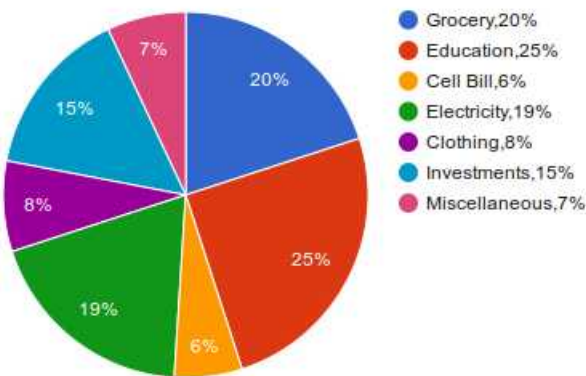
Here,  $21952^{(1/3)} = 28$

Now,  $28 + 33 = 61$

**Instructions**

Study the following Pie Graph carefully and answer the questions given below:

The pie chart given below represents the budget estimated by a family for their monthly expenses. The total salary is Rs. 32,000 per month



**Question 66**

What is the budget estimated by the family on Clothing and Grocery together ?

- A Rs. 8,960
- B Rs. 8,550
- C Rs. 8,780
- D Rs. 8,690

E Rs. 8,850

**Answer: A**

**Explanation:**

Budget estimated on clothing =  $(8/100) \times 32000 = 2560$

Budget estimated on grocery =  $(20/100) \times 32000 = 6400$

Total =  $2560 + 6400 = 8960$

(METHOD II)

Total % sum on clothing and grocery =  $8+20 = 28\%$

Estimated budget on both =  $(28/100) \times 32000 = 8960$

**Question 67**

**Due to a sudden marriage, the family incurs Miscellaneous expenditure of Rs. 3,040/- in total. How much is the increase in the amount under this head from that of the budgeted?**

A Rs. 2,240

B Rs. 304

C Rs. 800

D Rs. 224

E None of these

**Answer: C**

**Explanation:**

Estimated budget on miscellaneous =  $(7/100) \times 32000 = \text{Rs. } 2240$

Expenditure incurred on miscellaneous = Rs. 3040 (given)

Increase in amount =  $3040 - 2240 = \text{Rs. } 800$

**Question 68**

**The family actually paid Rs. 4,672 on Grocery. What is the difference in the amount budgeted and spent on Grocery ?**

A Rs. 1,738

B Rs. 1,672

C Rs. 467

D Rs. 1,038

E None of these

**Answer: E**

**Explanation:**

Estimated budget on grocery =  $(20/100) \times 32000 = \text{Rs. } 6400$

Actual spent on grocery = Rs. 4672 (given)

Difference in both amounts =  $6400 - 4672 = \text{Rs. } 1728$

**Question 69**

**What is the difference in the amount estimated by the family on Electricity and cell bill ?**

- A Rs. 1,920
- B Rs. 4,160
- C Rs. 6,080
- D Rs. 8,000
- E Rs. 4,480

**Answer: B**

**Explanation:**

Amount estimated on electricity =  $(19/100) \times 32000 = \text{Rs. } 6080$

Amount estimated on cell bill =  $(6/100) \times 32000 = \text{Rs. } 1920$

Difference between both bills =  $6080 - 1920 = \text{Rs. } 4160$

(METHOD II)

% difference in electricity and cell bill =  $19 - 6 = 13\%$

Estimated difference =  $(13/100) \times 32000 = \text{Rs. } 4160$

**Question 70**

The family saved Rs. 1,920 on their Electricity Bill, as it was less than the estimated budget. What is the percentage of Electricity Bill amount of the total salary ?

- A 10.5
- B 12
- C 14.5
- D 13
- E 16

**Answer: D**

**Explanation:**

Estimated electricity budget =  $(19/100) \times 32000 = \text{Rs. } 6080$

Savings in electricity bill = Rs. 1920

Actual expenditure in electricity bill =  $6080 - 1920 = \text{Rs. } 4160$

% of electricity bill of total salary =  $(4160/32000) \times 100 = 13\%$

**Instructions**

For the following questions answer them individually

**Question 71**

The average speed of a train is 3 times the average speed of a car . The car covers a distance of 520 kms in 8 hours .how much distance will the train cover in 13 hours ?

- A 2553 kms
- B 2585 kms
- C 2355 kms
- D 2535 kms

E None of these

**Answer: D**

**Explanation:**

Let speed of train be  $x$  and speed of car be  $y$ .

Car covers 520km in 8 hrs, it's speed =  $520/8 = 65\text{km/hr}$

Speed of train =  $3 * 65 = 195\text{km/hr}$

Distance covered by train in 13 hrs =  $13 * 195 = 2535\text{km}$

**Question 72**

If the numerator of a fraction is increased by 400% and the denominator is increased by 500% the resultant fraction is  $\frac{10}{21}$ . What was the original fraction ?

A  $\frac{5}{12}$

B  $\frac{8}{13}$

C  $\frac{17}{14}$

D  $\frac{4}{7}$

E None of these

**Answer: D**

**Explanation:**

Let the original fraction be  $\frac{X}{Y}$

After 400% increase, the numerator becomes  $5X$  and after 500% increase, the denominator becomes  $6Y$

Hence, the resulting fraction becomes  $\frac{5X}{6Y} = \frac{10}{21}$

So,  $\frac{X}{Y} = \frac{4}{7}$

**Question 73**

10 years ago, the ages of A and B were in the ratio of 13: 17. 17 years from now the ratio of their ages will be 10: 11. What is the age of B at present ?

A 37 years

B 40 years

C 27 years

D 44 years

E None of these

**Answer: C**

**Explanation:**

Let the present ages of A and B be  $x$  and  $y$ .

10 years ago, the ages of A and B were in the ratio of 13: 17 i.e.  $\frac{x-10}{y-10} = \frac{13}{17}$   
i.e.  $17x - 13y = 40$

17 years from now the ratio of their ages will be 10: 11. i.e.  $\frac{x+17}{y+17} = \frac{10}{11}$   
i.e.  $10y - 11x = 17$

Simultaneously solving the two equation we get,  $x=23$  and  $y=27$  years.

Option C is correct answer.

**Instructions**

Which of the phrases (A), (B), (C), and (D) given below should replace the phrases given in bold in the following sentence to make the sentence grammatically meaningful and correct? If the sentence is correct as it is and "No correction is required", mark (E) as the answer.

**Question 74**

They had registered a complaint against her as she "have violated" the contract.

- A had violence
- B had violated
- C has violate
- D have violate
- E No correction required

**Answer: B**

**Explanation:**

In the highlighted part, present perfect tense has been wrongly used instead of past perfect tense. The correct sentence would read as:  
They had registered a complaint against her as she **had violated** the contract.

**Instructions**

For the following questions answer them individually

**Question 75**

1/3rd the diagonal of a square is  $3\sqrt{2}m$ . What is the measure of the side of the concerned square?

- A 12 m
- B 9 m
- C 18 m
- D 6 m
- E 7 m

**Answer: B**

**Explanation:**

$$\text{Diagonal} = 3 \times 3\sqrt{2} = 9\sqrt{2}$$

$$\Rightarrow \text{Side} = 9$$

**Question 76**

The ratio of two numbers is 5:6. The product of the HCF and LCM of the two numbers is 120. What is the HCF of the two numbers?

- A 2
- B 4
- C 6
- D 8
- E 1

**Answer: A**

**Explanation:**

Let the two numbers be  $5h$  and  $6h$  where  $h$  is the HCF of the numbers. Product of the numbers = Product of LCM and HCF.

$$\Rightarrow 30h^2 = 120 \Rightarrow h = 2$$

So, the HCF of the two numbers is 2

**Question 77**

The present population of village P is 2.5 time the present population of village Q. If after a year the population of village Q is 16537 and has been increased at a rate of 15%. What is the present population of village P?

A 34740

B 38560

C 36820

D 35950

E 30350

**Answer: D**

**Explanation:**

Let the population of village Q before 1 year be  $x$ .

There has been 15% increase in population and population now stands at 16537

$$\text{Hence, } 1.15x = 16,537$$

$$x = 14380$$

$$\text{Population of village P} = 2.5 \times 14380 = 35,950$$

**Question 78**

In how many years will Rs. 4400 amount to Rs. 5984 at 4 pcpa simple interest ?

A 9

B 6

C 8

D 7

E None of these

**Answer: A**

**Explanation:**

According to the question:

$$\text{Simple Interest will be} = 5984 - 4400 = 1584$$

$$\text{Hence, } 1584 = 4400 \times \frac{4}{100} \times n \text{ (Where } n \text{ is number of years)}$$

$$\text{So } n = 9 \text{ years}$$

**Question 79**

Two persons A and B start a business with investments of Rs. 24000 and Rs.28000 respectively. After 4 months C also joined them with certain investment. Total profit at the end of the year was Rs. 19950. C's share in profit was Rs. 7600. What was the C's investment in the business ?

A Rs. 48000



B Rs. 45000

C Rs. 50000

D Rs. 40000

E None of these

**Answer: A**

**Explanation:**

let the investment of C in business be Rs Y

As it is mentioned that A and B remain invested for whole year and have contributions Rs 24000 and Rs 28000 respectively. and C joined them only for 8 months in a years so the Profit will divide in ratio = A:B:C =  $(24000 \times 12) : (28000 \times 12) : (Y \times 8)$

profit at year end = Rs 19950

and C's share =  $\frac{Y}{78000+Y} \times 19950 = 7600$

$Y = 29718 + 0.381 Y$

$Y = 48009 \sim \text{Rs } 48000$

**Question 80**

**3 pipes when opened for 3 hours can fill 3 buckets. How many buckets can 2 pipes open for 2 hours approximately fill?**

A  $\frac{2}{3}$  buckets

B 2 buckets

C 1 bucket

D  $\frac{4}{3}$  buckets

E None of the above.

**Answer: D**

**Explanation:**

2 pipes open for 2 hours will fill  $\frac{2}{3} * \frac{2}{3} * 3$  buckets =  $\frac{4}{3}$  buckets.