



# QUANTITATIVE APTITUDE

## DATA INTERPRETATION



## Stay Connected With SPNotifier



TM



**EBooks for Bank Exams, SSC & Railways 2020**

**General Awareness EBooks**

**Computer Awareness EBooks**

**Monthly Current Affairs Capsules**



## Quantitative Aptitude

**Quantitative Aptitude** is an important and highly scoring topic in **Competitive Exams** especially in **Bank Exams**. Quantitative Aptitude or Data Interpretation based questions are structured assessments that evaluate the talent and skills of the Candidates. It measures the problem-solving skills of the candidates so it has become an important part of Bank Exams.

Every bank exam includes Quantitative Aptitude in their Prelim and Mains Exams. Banks like **SBI, IBPS (for Clerk & PO), IBPS RRB and RBI Grade B** includes Quantitative Aptitude in their syllabus to examine the candidates' **Thinking power**. To understand the importance of Quantitative Aptitude let us have a look at the weightage of this topic in different banking exams.

### Prelims and Mains Syllabus for Bank Exams

Prelims Syllabus	Mains Syllabus
<ul style="list-style-type: none"><li>◆ Number Series</li><li>◆ Data Interpretation</li><li>◆ Simplification/Approximation</li><li>◆ Quadratic Equation</li><li>◆ Data Sufficiency</li><li>◆ Mensuration</li><li>◆ Average</li><li>◆ Profit and Loss</li><li>◆ Ratio and Proportion</li><li>◆ Time and Work</li><li>◆ Time and Distance</li><li>◆ Probability</li><li>◆ Partnership</li><li>◆ Problem on Ages</li><li>◆ Simple and Compound Interest</li><li>◆ Permutation and Combination</li></ul>	<ul style="list-style-type: none"><li>◆ Simplification</li><li>◆ Average</li><li>◆ Percentage</li><li>◆ Ratio and Percentage</li><li>◆ Data Interpretation</li><li>◆ Mensuration and Geometry</li><li>◆ Quadratic Equation</li><li>◆ Interest</li><li>◆ Problems of Ages</li><li>◆ Profit and Loss</li><li>◆ Number Series</li><li>◆ Speed, Distance and Time</li><li>◆ Time and Work</li><li>◆ Number System</li><li>◆ Data Sufficiency</li><li>◆ Linear Equation</li><li>◆ Permutation and Combination</li><li>◆ Probability</li><li>◆ Mixture and Allegations</li></ul>



## Quantitative Aptitude – Data Interpretation

**Direction (1 – 5):** Read the following information carefully and answer the given questions:

Total distance between A to B is 240km. Train P starts running with an average speed of (S) kmph from A to B while another train Q starts running after 2 hours of train A and reaches B 60 minutes before train P. If train A stops for 60 minutes at a line crossing and second train did not stop at any place, then the ratio between the speed of train P to speed of train Q is 4:5. Prem distributed Rs.14000 between his two daughters Anu and Bharathi and both of them invested at the rate of (S-6) % SI per annum. The age of Bharathi and Anu at that time was 18 years and (S) years respectively and such that each daughter may get equal amounts, when they attain the age of 21 years. Initial amount the Anu has is (T). The price of article increased by (S)% every year. If the difference between the price at the end of the third year and fourth years is (U) and the price at the end of second year is Rs.23200. Prem sells his car, if profit on selling a car for (T) is thrice the loss on selling it for Rs.4500. The Cost price of Prem car is (V).

**1) Find the value in the place of (S)**

- A. 15 kmph
- B. 26 kmph
- C. 16 kmph
- D. 18 kmph
- E. None of these

**2) Find the value in the place of (V)**

- A. Rs.8000
- B. Rs.6000
- C. Rs.4000
- D. Rs.5000
- E. None of these



**3) Quantity I: U**

**Quantity II: T**

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity II > Quantity I
- D. Quantity II  $\geq$  Quantity I
- E. Quantity I = Quantity II or Relation cannot be established

**4) Find the difference between V and T?**

- A. Rs.1500
- B. Rs.2500
- C. Rs.500
- D. Rs.1600
- E. None of these



5) Find the value in the place of (U)

- A. 4305.92
- B. 4206.92
- C. 4108.92
- D. 4006.92
- E. None of these

**Directions (6 – 10):** Study the following graph carefully and answer the given questions.

The table shows the discount rate of four different items in five different shops

Shops	Item 1	Item 2	Item 3	Item 4
A	25%	15%	—	30%
B	20%	—	16%	—
C	—	12%	—	15%
D	10%	30%	20%	—
E	30%	—	10%	20%

TM

6) **Quantity I:** If the ratio of the marked price of item 1 and item 4 in shop E is 15: 14, and the marked price of shop D in item 1 is Rs. 7000. Find the selling price of item 4 in shop E?

**Quantity II:** In item 2, if marked price in shop C is 25% more than the cost price and the profit percentage of shop C is 10% which is equal to 280. Find the cost price of shop D if marked price of item 2 in shop D is 10% more than the cost price?

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity I < Quantity II
- D. Quantity I  $\leq$  Quantity II
- E. Quantity I = Quantity II (or) Relationship cannot be determined

7) **Quantity I:** Item 3, cost price of all the shops is Rs. 4800 and the marked price is 40%, 50% and 25% more than the cost price in shop B, D and E respectively. Find the total selling price of shop B, D and E together

**Quantity II:** If the selling price of item 4 of all the shops is Rs. 9520, find the total marked price of shop A, C and E?

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity I < Quantity II
- D. Quantity I  $\leq$  Quantity II
- E. Quantity I = Quantity II (or) Relationship cannot be determined



8) **Quantity I:** In shop E, Cost price of item 1 is Rs. 800 more than the cost price of item 4 and the marked price of item 1 and 4 is 60 % and 80 % more than the cost price respectively. Find the selling price of item 4 if the selling price is same for both the items?

**Quantity II:** If the marked price of item 3 in shop B is 20% more than the cost price, which is 6000, find the marked price of item 3 in shop D?

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity I < Quantity II
- D. Quantity I  $\leq$  Quantity II
- E. Quantity I = Quantity II (or) Relationship cannot be determined

9) In shop D, if the ratio of marked price in item 1, item 2 and item 3 is 56: 72: 63 and the marked price of item 1 in shop B is Rs.6300.

**Quantity I:** Find the marked price of item 2 in shop A

**Quantity II:** Find the marked price of item 3 in shop E

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity I < Quantity II
- D. Quantity I  $\leq$  Quantity II
- E. Quantity I = Quantity II (or) Relationship cannot be determined

10) **Quantity I:** Find the marked price of item 4 in shop A. If the marked price of item 4 in shop E is Rs. 6300

**Quantity II:** Find the marked price of item 2 in shop C. If the marked price of item 2 in shop D is Rs. 4400

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity I < Quantity II
- D. Quantity I  $\leq$  Quantity II
- E. Quantity I = Quantity II (or) Relationship cannot be determined

**Direction (11 –15):** Read the following information carefully and answer the given questions:

Sachin and Virat played five different matches. Sachin scored 60% runs in Match1 whereas score of Virat in the same match is 100. Sachin scored 60% runs in Match2 which is 60 more than the runs of Virat in the same match. The ratio between the runs of Virat and Sachin in Match3 is 2: 3, whereas the difference in their runs in Match3 is 48. The total score in Match3 is 80% of the total score in Match5. Sachin scored 78 runs in Match4 which is 18 more than runs of Virat in the same Match. Sachin scored 60 less than runs that of Virat in the same Match.



11) **Quantity I:** What is average score of Sachin in all the 5 matches together?

**Quantity II:** What is the average score of Virat in all the 5 matches together?

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity II > Quantity I
- D. Quantity II  $\geq$  Quantity I
- E. Quantity I = Quantity II or Relation cannot be established

12) Find the total score in Match6?

**Statement I:** Sachin's score in Match6 is 50% of the runs in his score in Match2 and the Virat score in Match6 is 80% of Sachin in the same match.

**Statement II:** Sachin scored 40% runs in Match6.

- A. Only I
- B. Only II
- C. Either I or II sufficient
- D. All I and II necessary to the answer the question
- E. The question can't be answered even with all I and II

13) **Quantity I:** Virat score in Match5 is what percent of the total score in Match3?

**Quantity II:** Sachin score in Match3 is what percent of the total score in the same match?

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity II > Quantity I
- D. Quantity II  $\geq$  Quantity I
- E. Quantity I = Quantity II or Relation cannot be established

14) Find the difference between the total score of Virat in all the given five Matches together and the sum of the total score in Match4 and Match2 together?

- A. 148
- B. 152
- C. 118
- D. 147
- E. None of these

15) What is the average total score of the all the five matches together?

- A. 280
- B. 260
- C. 270
- D. 250
- E. None of these





**Directions (16 – 20):** Study the following graph carefully and answer the given questions.

The table shows the number of days taken by Swathi to complete the given percentage of work and the time ratio of Swathi to Shivani to complete the whole work.

Job Name	Percentage of a work done by Swathi	Number of days taken by Swathi	Days ratio of Swathi to Shivani to complete the whole work alone
A	20%	5	5: 4
B	50%	15	6:5
C	40%	12	2: 1
D	15%	3	5: 6
E	30%	6	5: 4

**16) Find the number of days taken by Sumaya to complete the Job-C alone?**

**Statement I:** Swathi and Shivani started working to complete Job-C, Sumaya also joins with them to complete the work 4 days before the actual time taken by Swathi and Shivani working together.

**Statement II:** Swathi started working to complete Job-C with 75% of her original efficiency. After some days Sumaya joins with her and completed Job-C in 30 days.

- A. Only statement I alone is sufficient to answer
- B. Only statement II alone is sufficient to answer
- C. Either statement I or II alone is sufficient to answer the question
- D. Both statements I and II alone are sufficient to answer the question
- E. Both statements I and II alone are not sufficient to answer the question

**17) Find the total wage to complete Job-B?**

**Statement I:** Swathi and Shivani started working to complete Job-B with their 20% and 25% less than the original efficiency respectively. The ratio of the number of days taken by Swathi and Shivani to complete Job-B is 3 : 4. The difference between their wages is Rs. 300.

**Statement II:** Shivani started working to complete Job-B. After 6 days Swathi also joins with her and increased her efficiency by 20%. Swathi left the work 5 days before the work was completed and get Rs. 8400 as wage.

- A. Only statement I alone is sufficient to answer
- B. Only statement II alone is sufficient to answer
- C. Either statement I or II alone is sufficient to answer the question
- D. Both statements I and II alone are sufficient to answer the question
- E. Both statements I and II alone are not sufficient to answer the question





18) Find the total number of days taken to complete Job A?

**Statement I:** Shivani started working to complete Job-A and after 5 days Janani joins with her. The ratio of the number of days they worked to complete Job-A is 35: 12.

**Statement II:** Sumi is 25% more efficient than Swathi to complete Job-A. They worked alternatively starting with Sumi to complete Job-A.

- A. Only statement I alone is sufficient to answer
- B. Only statement II alone is sufficient to answer
- C. Either statement I or II alone is sufficient to answer the question
- D. Both statements I and II alone are sufficient to answer the question
- E. Both statements I and II alone are not sufficient to answer the question

19) Find the number of days taken by Krish alone to complete Job-D?

**Statement I:** Shivani and Krish started working to complete Job-D and the ratio of the number of days worked by Shivani to Krish is 5: 2.

**Statement II:** Shivani and Krish completes the Job- B in  $(375/88)$  days less than the total number of days taken by Shivani and Swathi working together till the work completed.

- A. Only statement I alone is sufficient to answer
- B. Only statement II alone is sufficient to answer
- C. Either statement I or II alone is sufficient to answer the question
- D. Both statements I and II alone are sufficient to answer the question
- E. Both statements I and II alone are not sufficient to answer the question

20) What is the efficiency ratio of Janavi to Kamali?

**Statement I:** Shivani started working to complete Job- C and after 4 days, Janavi joins with him and after few days Janavi replaced by Kamali. The remaining work was completed in 5 days.

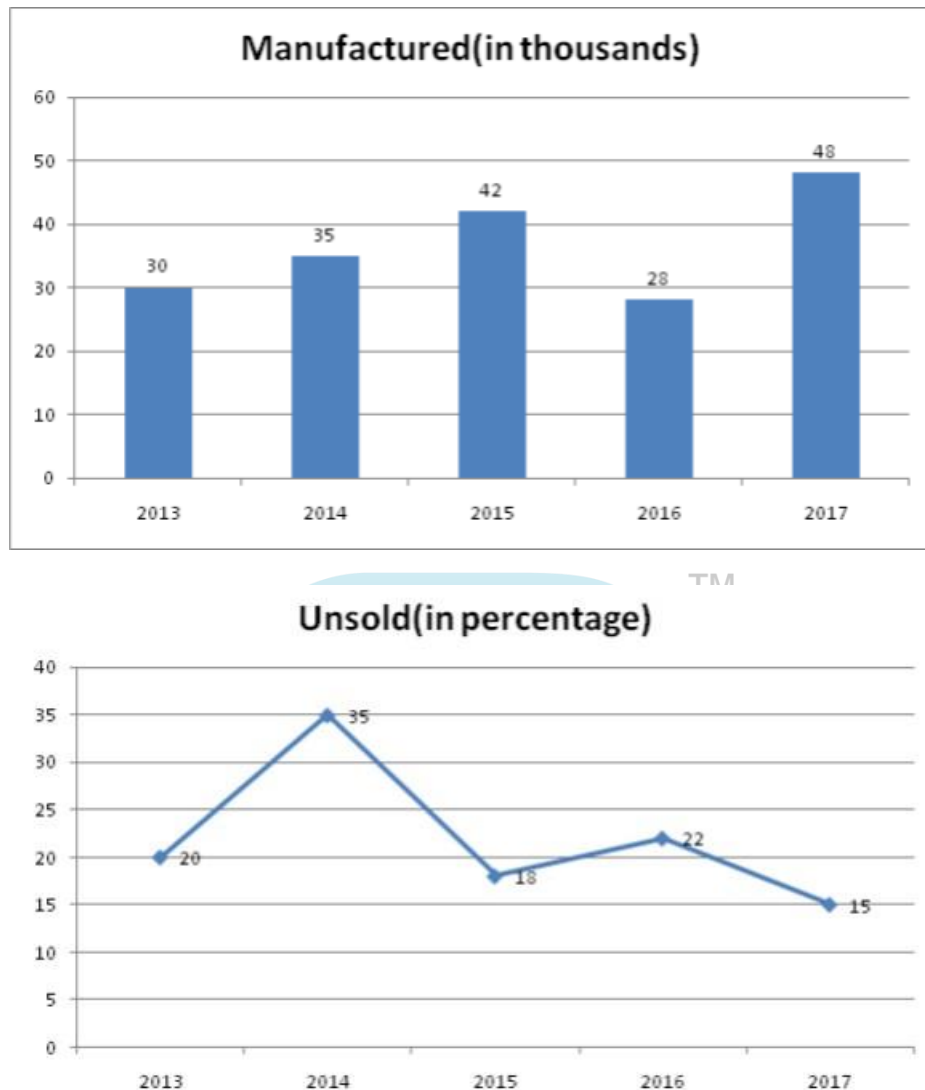
**Statement II:** Janavi and Kamali started working together to complete Job-B and completed the work same as the number of days taken by Shivani and Swathi working together.

- A. Only statement I alone is sufficient to answer
- B. Only statement II alone is sufficient to answer
- C. Either statement I or II alone is sufficient to answer the question
- D. Both statements I and II alone are sufficient to answer the question
- E. Both statements I and II alone are not sufficient to answer the question



**Directions (21 – 25):** Study the following information carefully and answer the given questions:

The given bar graph shows the number (in thousands) of products manufactured and line graph shows percentage of unsold products by a company over the years 2013 – 2017.



**21) What is the average number of products sold in over the years 2013 to 2017?**

- A. 28766
- B. 27866
- C. 28966
- D. 37866
- E. None of these



22) What is the ratio of defective to non-defective product of the company in 2017?

**Statement I:** The defective product of the company in 2017 is 80% of the unsold product of company in the year 2015.

**Statement II:** Non defective product of the company in the year 2017 is half of the number of product manufactured in the year 2013.

- A. Only I
- B. Only II
- C. Either I or II sufficient
- D. All I and II necessary to the answer the question
- E. The question can't be answered even with all I and II

23) What is the unsold product of the company in 2018?

**Quantity I:** The number of products is manufactured by company in the year 2018 is 120% of the product manufactured in 2016. The ratio of the number of product sold and unsold in the year 2018 is 4: 3.

**Quantity II:** The number of unsold products in the year 2018 is equal to the number of defective products in the year 2014. And the non-defective product of the company in the year 2014 is 80% of the number of products sold in 2013.

- A. Quantity I > Quantity II
- B. Quantity I  $\geq$  Quantity II
- C. Quantity II > Quantity I
- D. Quantity II  $\geq$  Quantity I
- E. Quantity I = Quantity II or Relation cannot be established

24) Sum of the difference between the sold and unsold product in 2014 and 2015 together is approximately what percent more than that of the total number of product unsold in the year 2013, 2016 and 2017 together?

- A. 105%
- B. 93%
- C. 72%
- D. 66%
- E. 117%

25) What is the average number of products manufactured by company 2014, 2016 and 2017 together?

- A. 35000
- B. 39000
- C. 37000
- D. 34000

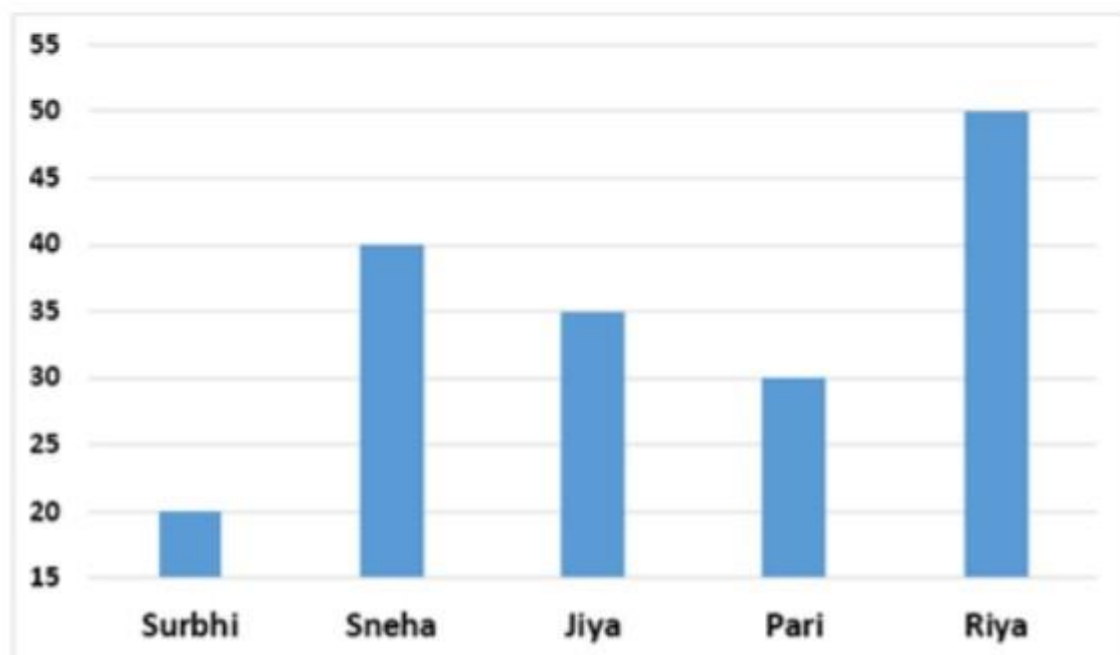
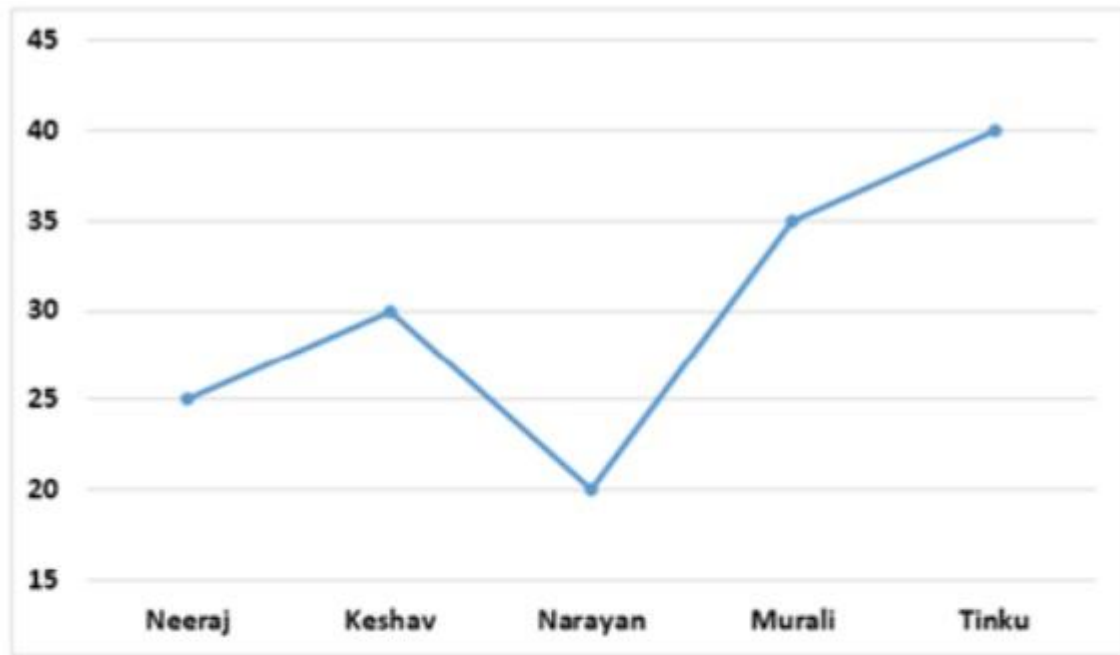


E. None of these

**Directions (26-30):** Study the following information carefully and answer the questions given below:

The line graph represents number of days taken by five boys to complete a piece of work.

The bar graph represents number of days taken by five girls to complete the piece of work.





26) Neeraj started the work and left after five days. Find the number of days taken by Pari and Riya to complete the remaining part of the work.

- A. 12 days
- B. 20 days
- C. 15 days
- D. 10 days
- E. None of these

27) Find the respective ratio of efficiencies of Murali and Tinku together and efficiencies of Surbhi and Sneha together.

- A. 3:5
- B. 5:7
- C. 4:5
- D. 3:4
- E. None of these

28) If Narayan and Jiya work alternately started with Narayan, find the number of days taken by them to complete the work.

- A.  $22\left(\frac{1}{5}\right)$  days
- B.  $25\left(\frac{1}{4}\right)$  days
- C.  $23\left(\frac{1}{6}\right)$  days
- D.  $27\left(\frac{1}{2}\right)$  days
- E. None of these

29) If all the girls work together, find the number of days taken by them to complete the work.

- A.  $\left(\frac{2200}{279}\right)$  days
- B.  $\left(\frac{4200}{659}\right)$  days
- C.  $\left(\frac{2100}{559}\right)$  days
- D.  $\left(\frac{1400}{359}\right)$  days
- E. None of these

30) Keshav and Narayan started the work and left after four days. Find the number of days taken by Sneha to complete the remaining part of the work.

- A.  $\frac{50}{3}$  days
- B.  $\frac{40}{3}$  days
- C.  $\frac{80}{3}$  days
- D.  $\frac{20}{3}$  days
- E. None of these

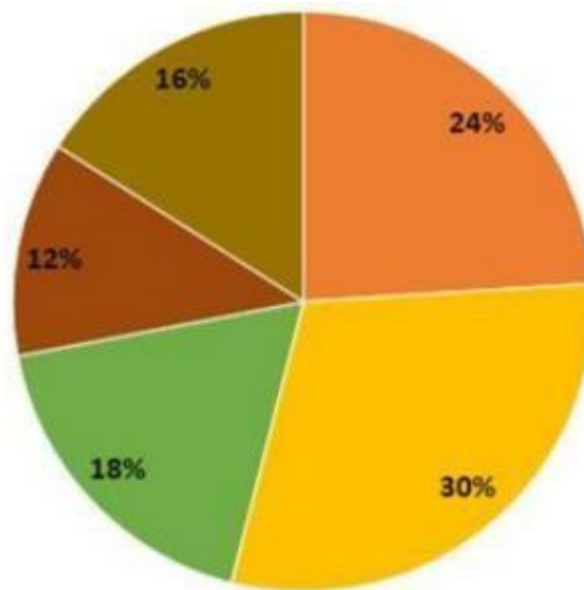


**Directions (31 -35):** Study the following information carefully and answer the questions given below:

The pie chart represents percentage wise distribution of total number of students in five schools.

The table represents ratio of number of local students and non-local students.

Total number of students in five schools = 8000



■ P ■ Q ■ R ■ S ■ T

Schools	Local : Non-local
P	5:3
Q	3:2
R	5:4
S	1:3
T	3:5

31) Out of the total local students of school P 40% are girls. Find the difference between number of local girls and number of local boys in school P.

- A. 280
- B. 420
- C. 240
- D. 360
- E. None of these



**32) Find the respective ratio of number of local students in school Q and number of non-local students in school S.**

- A. 5:4
- B. 2:1
- C. 3:2
- D. 4:3
- E. None of these

**33) Ratio of number of boys and number of girls in school R is 5:4 respectively. If out of the local students in school R, 60% are girls, find the number of non-local girls in school R.**

- A. 160
- B. 540
- C. 240
- D. 480
- E. None of these

**34) Number of local students in school T and school S together is what percent more/less than the number of local students in school P?**

- A. 40% more
- B. 35% less
- C. 40% less
- D. 35% more
- E. None of these

**35) Find the total number of non-local students in all the schools together.**

- A. 5220
- B. 3840
- C. 2460
- D. 4220
- E. None of these

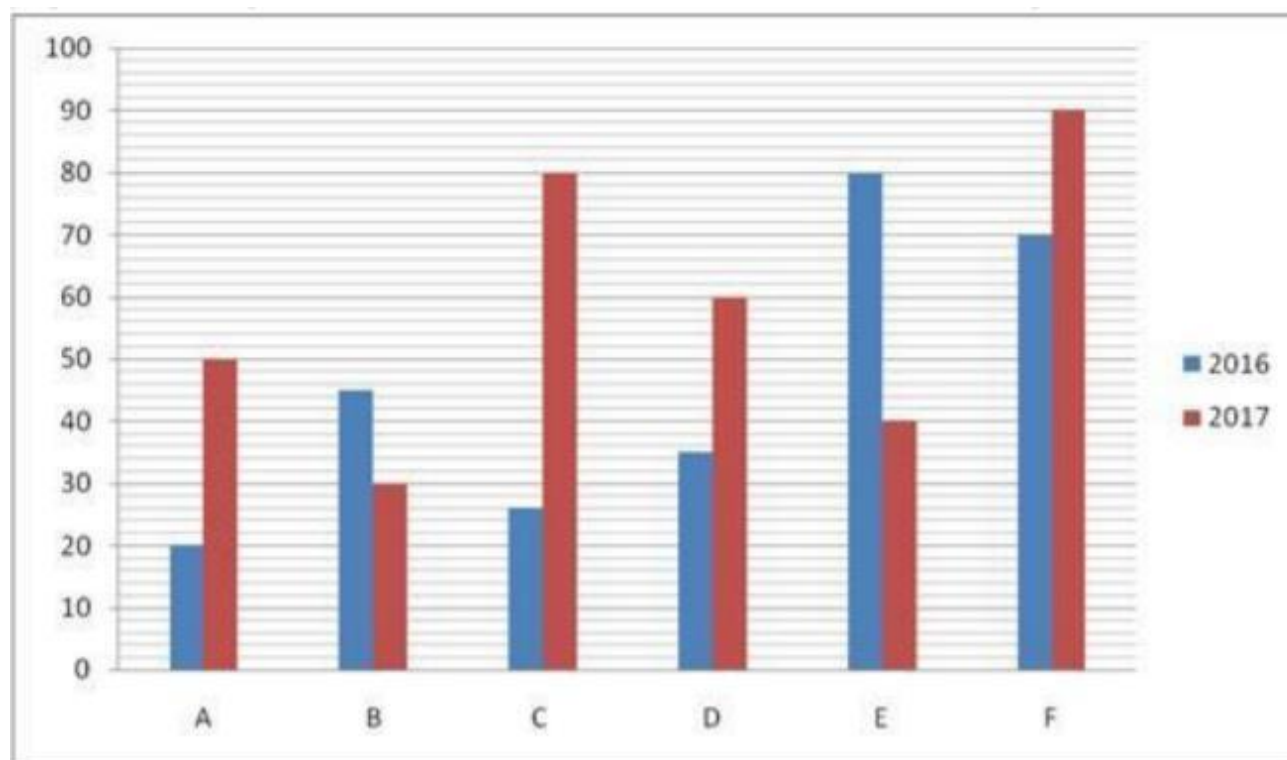






**Directions (36 - 40):** Study the following information carefully and answer the given questions:

The following bar graph shows the production of mobiles (In thousands) of different companies in two different years.



Company	Percentage of export in 2016	Percentage of Export in 2017
A	40%	60%
B	42%	-
C	20%	-
D	30%	-
E	-	70%
F	25%	-



36) The average number of mobiles exported by company D and F in 2017 is 35000 while the mobiles exported by company D in 2016 is twice the export in 2017 then find the percentage of export by company F out of total production of company F in 2017?

- A. 65 %
- B. 72 %
- C. 80 %
- D. 85 %
- E. 92 %

37) If company E exported a total of 50000 mobiles in the year 2016 and 2017, then find the percentage of mobiles exported by company E in 2016?

- A. 35 %
- B. 27.5 %
- C. 20 %
- D. 17.5 %
- E. None of these

38) The total number of mobiles exported by company A in 2016 and 2017 is  $\frac{2}{3}$  of the mobiles exported by company C in these years then find the percentage of mobiles that were exported by company C out of total production in 2017?

- A. 72 %
- B. 56.25 %
- C. 45 %
- D. 64.75 %
- E. 75 %

39) The 20% of the mobiles exported by company B in 2016 are defective while the ratio between the defective mobiles exported by company B in the year 2016 and 2017 is 7 : 5 and the percentage of defective mobiles out of total export by company B in 2017 is 13.5% then find the percentage of mobile exported by company B out of total production?

- A. 45.66 %
- B. 72.77 %
- C. 48.55 %
- D. 66.67 %
- E. 56.33 %



40) Find the difference between the mobiles exported by company A, B and D in 2016 to that of the mobiles exported by company A and E in 2017?

- A. 18500
- B. 24200
- C. 20600
- D. 19700
- E. None of these

**Directions (41 - 45):** Study the following information carefully and answer the given questions:

The following table represents time taken (in hours) by different pipes to fill a cistern. Some values are missing.

Pipes	Time taken to fill the cistern
A	24
B	-
C	-
D	30
E	45
F	-

41) If A and C kept open for 4 hours then A is replaced by D and kept open for 5 more hours, the tank is filled. In how many hours pipe C alone can fill the cistern?

- A.  $7\frac{3}{4}$  hours
- B.  $13\frac{1}{2}$  hours
- C.  $6\frac{5}{6}$  hours
- D.  $12\frac{3}{4}$  hours
- E. None of these

42) Two pipes D and E are opened simultaneously to fill the cistern. After how much time should D be closed so that E alone can fill the cistern in another 20 hours?

- A. 8 hours
- B. 14 hours
- C. 12 hours
- D. 10 hours
- E. None of these



43) If C takes half of the time taken by F to fill the cistern and F takes half of the time taken by B to fill the cistern and all of them working together can fill the cistern in 48 hours, What is the time taken by F to fill the cistern?

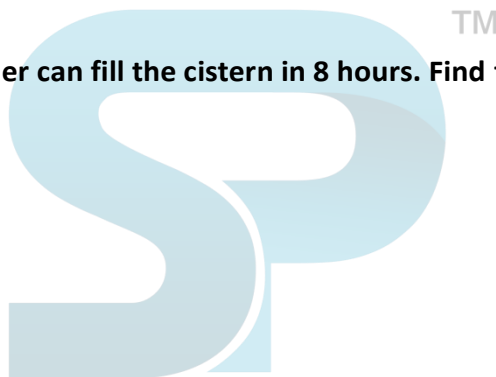
- A. 152 hours
- B. 144 hours
- C. 186 hours
- D. 168 hours
- E. None of these

44) Two pipes A and D can fill the cistern. If they are opened on alternative hours and if pipe A is opened first, in how many hours will the cistern be full?

- A.  $24\frac{1}{3}$  hours
- B.  $26\frac{1}{5}$  hours
- C.  $26\frac{1}{4}$  hours
- D.  $25\frac{1}{2}$  hours
- E. None of these

45) Three pipes A, D and F together can fill the cistern in 8 hours. Find the time taken by F alone to fill the cistern?

- A. 20 hours
- B. 15 hours
- C. 18 hours
- D. 12 hours
- E. None of these



**Directions (46 - 48):** Read the following information carefully and answer the given questions.

There are 400 students in a school in which 25% girls. All of them like at least one of the three different fruits viz. Mango, Apple and Papaya.

**Boys:** 10% likes Mango and Papaya together not Apple. 5% likes all the three fruits and 25% likes only Apple. 15% likes only Papaya.

**Girls:** 20% likes only Papaya and 15% likes Mango and Papaya but not Apple. 20% likes only Mango.

46) Find the ratio of the number of boys like Mango to the number of girls like Apple?

**Statement I:** 10% of boys like Apple and Papaya but not Mango

**Statement II:** 20% of boys like only Mango

- A. Statement I alone is sufficient to answer the question
- B. Statement II alone is sufficient to answer the question
- C. Either statement I alone or II alone is sufficient to answer the question



- D. Both the statements I and II together are not necessary to answer the question
- E. Both the statements I and II together are necessary to answer the question

**47) If 20% of girls like Mango and Apple and 15% of girls like Only Apple. 50% of boys like Mango.**

**Quantity I:** Find the number of boys like Apple and Papaya but not Mango

**Quantity II:** Find the number of girls like Apple and Papaya but not Mango

**Quantity III:** If the number of girls like Mango and Apple but not Papaya is 2 more than the number of girls like Apple and Papaya but not Mango, then find the number of girls like all the three fruits.

**Which of the following should be placed in the blank spaces of the expression “Quantity I \_\_ Quantity II \_Quantity III” from left to right with respect to the above statements?**

- A. >, >
- B. <, >
- C. <, <
- D. >, <
- E. None of these

**48) If the 20% of boys and 15% of girls like only Mango and Only Apple respectively, then find the difference between the number of boys and girls like at least two fruits.**

- A. 75
- B. 90
- C. 80
- D. 110
- E. 55

**Directions (49 -50): Study the following graph carefully and answer the given questions.**

Train P started from station A towards station D with the speed of 40 Km/h at the same time train Q started from station D towards station A with the speed of 60 Km/h. All the four stations are in a straight line from left to right in the order A, B, C and D and distance between the consecutive stations is same (i.e.) 480 Km.

**49) Which of the following statement is not true if train P and Q started from station A and B respectively at the end of 3 hours?**

- A. Train Q covered 60 km more than the train P
- B. Train Q is 360 km far away from station C
- C. Train P is 360 km far away from station B
- D. The distance between train P and train Q is 1140 km
- E. All are true



50) At what time train P and Q will meet each other?

- A. 12 hours 20 minutes
- B. 13 hours 30 minutes
- C. 14 hours 20 minutes
- D. 14 hours 24 minutes
- E. None of these





## Answers and Explanations

1. Answer: C

**Explanation [1-5]:** Let us take the original time taken to cross 240 km distance be x hours

Time taken by train P to reach B = (X+1)

Time taken by train Q to reach B = (x+1)-2-1=(x-2)

$$\text{Speed of train P} = \frac{240}{(x+1)}$$

$$\text{Speed of train Q} = \frac{240}{(x-2)}$$

$$\frac{\frac{240}{(x+1)}}{\frac{240}{(x-2)}} = \frac{4}{5}$$

$$\frac{(x-2)}{(x+1)} = \frac{4}{5}$$

$$X=14$$

Time taken by train P = 15 hrs

Time taken by train Q = 12 hrs

$$\text{Speed of train P (S)} = \frac{240}{15} = 16 \text{ kmph}$$

Let the amount received by Anu = A

Let the amount received by Bharathi = 14000 - A

$$A + \frac{A \times 5 \times 10}{100} = (14000 - A) + \left( \frac{(14000 - A) \times 10 \times 3}{100} \right)$$

$$A + \frac{A}{2} = (14000 - A) + 4200 - \frac{3A}{10}$$

$$3A/2 = 18200 - A - 3A/10$$

$$3\frac{A}{2} + A + \frac{3A}{10} = 18200$$

$$28A = 182000$$

$$A = 6500$$

Anu received (T) = Rs. 6500

Initial amount = a







$$\text{Second year} = \frac{a \cdot 116}{100}$$

$$116a/100 = 23200$$

$$a = 20000$$

$$\text{Third year} = \frac{a \cdot 116}{100} \cdot \frac{116}{100}$$

$$\text{Fourth year} = \frac{a \cdot 116}{100} \cdot \frac{116}{100} \cdot \frac{116}{100}$$

Difference of fourth and third year

$$(U) = \frac{a \cdot 116}{100} \cdot \frac{116}{100} \cdot \frac{116}{100 - 1}$$

$$U = \frac{2000 \cdot 116}{100} \cdot \frac{116}{100} \cdot \frac{116}{100}$$

Difference of fourth and third year (U) = 4305.92

Cost price of car = V

$$6500 - V = 3(V - 4500)$$

$$6500 - V = 3V - 13500$$

$$4V = 20000$$

$$V = 5000$$



2. Answer: D

Explanation: Speed of train P (S) = 240/15 = 16 kmph

3. Answer: C

Explanation: Quantity I:

Difference of fourth and third year (U) = 4305.92

Quantity II:

Anu received (T) = Rs.6500

Quantity I < Quantity II

4. Answer: A

Explanation: Anu received (T) = Rs.6500

$$V = 5000$$



Required difference =  $6500 - 5000 = \text{Rs.}1500$

5. Answer: A

Explanation: Difference of fourth and third year (U) = 4305.92

6. Answer: A

Explanation [6-10]: Quantity I: If the ratio of the marked price of item 1 and item 4 in shop E is 15: 14, and the marked price of shop D in item 1 is Rs. 7000. Find the selling price of item 4 in shop E?

Selling price of item 1 in shop D =  $7000 * [(100 - 10)/100]$

=  $> 7000 * (90/100) = \text{Rs.} 6300$

Marked price of item 1 in shop E =  $[6300/(100-30)] * 100$

=  $> 6300/70 * 100 = 9000$

Marked price of item 4 in shop E =  $9000 * (14/15) = 8400$

Selling price of item 4 in shop E =  $8400 * [(100-20)/100]$

=  $> 8400 * 80/100 = \text{Rs.} 6720$

Quantity II: In item 2, if marked price in shop C is 25% more than the cost price and the profit percentage of shop C is 10% which is equal to 280. Find the cost price of shop D if marked price of item 2 in shop D is 10% more than the cost price?

Profit of item 2 in shop C = Rs. 280 = 10% of cost price of item 2 in shop C

Cost price of item 2 in shop C =  $280 * (100/10) = 2800$

Marked price of item 2 in shop C =  $2800 * [(100 + 25)/100]$

=  $> 2800 * 125/100 = 3500$

Selling price of item 2 in shop C =  $3500 * (100 - 12)/100$

=  $> 3500 * (88/100) = \text{Rs.} 3080$

Marked price of item 2 in shop D =  $3080 * (100/(100-30))$

=  $> (3080/70) * 100 = 4400$

Cost price of item 2 in shop D =  $(4400/110) * 100 = \text{Rs.} 4000$

7. Answer: C

8. Answer: C



9. Answer: A

10. Answer: A

11. Answer: A

Explanation [11-15]: **Match1:**

Sachin score in Match1=60%

Virat score in Match1=100 = (100 - 60) % = 40%

Sachin score in match1=100\*(60/40) =150

Total score in Match1= 100 + 150 =250

**Match2:**

Sachin score in match2= 60%

Virat score in match 2 = 40%

Difference = 60% - 40% = 20% = 60

100% = 300

Sachin score in match2= 60% = 300\*60/100 = 180

Virat score in match 2 = 40% = 300\*40/100 = 120

**Match3:**

Sachin score in match3 = (3/1)\*48 = 144

Virat score in Match3 = (2/1)\*48 = 96

Total score in match3 = 144 + 96 = 240

**Match4:**

Sachin score in Match4=78

Virat score inmatch4=78-18=60

Total score in match4=138

**Match5:**

Total Score in Match5 = 240\*(100/80) = 300

Sachin score in Match5 = x – 60



Virat score in Match5 = x

$$X + x - 60 = 300$$

$$2x = 360$$

$$X = 180$$

Sachin score in Match5 = 120

Virat score in Match5 = 180

**From quantity I,**

$$\text{Average} = (150 + 180 + 144 + 78 + 120) / 5 = 134.4$$

**From quantity II,**

$$\text{Average} = (100 + 120 + 96 + 60 + 180) / 5 = 111.2$$

Quantity I > Quantity II

**12. Answer:** A

**Explanation:** From Statement I,

$$\text{Sachin score in Match6} = 180 * (50/100) = 90$$

$$\text{Virat score in Match6} = 90 * (80/100) = 72$$

So, Statement I alone is sufficient to answer the question.

**From Statement II,**

Sachin scored 40% runs in Match6.

So, Statement II alone is not sufficient to the answer the question.

**13. Answer:** A

**Explanation:** From quantity I,

$$\text{Required percentage} = (180/240) * 100 = 75\%$$

From quantity II,

$$\text{Required percentage} = (144/240) * 100 = 60\%$$

**14. Answer:** C

**Explanation:** Virat's score =  $(100 + 120 + 96 + 60 + 180) = 556$



Sum of Match4 and Match2=300+138 = 438

Difference = 556 – 438 =118

**15. Answer:** A

**Explanation:** Average=  $(250+300+240+138+300)/5=245.6$

**16. Answer:** A

**Explanation [16-20]:** Total number of days taken by Swathi to complete Job A =  $5/20*100 = 25$  days

Total number of days taken by Shivani to complete

Job-A =  $25/5 *4 = 20$  days

Total number of days taken by Swathi to complete Job B =  $15/50*100 = 30$  days

Total number of days taken by Shivani to complete

Job-B =  $30/6 *5 = 25$  days

Total number of days taken by Swathi to complete Job C =  $12/40*100 = 30$  days

Total number of days taken by Shivani to complete

Job-C =  $30/2 *1 = 15$  days

Total number of days taken by Swathi to complete Job D =  $3/15*100 = 20$  days

Total number of days taken by Shivani to complete

Job-D =  $20/5 *6 = 24$  days

Total number of days taken by Swathi to complete Job E =  $6/30*100 = 20$  days

Total number of days taken by Shivani to complete

Job-E =  $20/5 *4 = 16$  days

Job Name	Swathi	Shivani
A	25	20
B	30	25
C	30	15
D	20	24
E	20	16



17. Answer: C

**Explanation: Statement I:** Swathi and Shivani started working to complete Job- B with their 20% and 25% less than the original efficiency respectively. The ratio of the number of days taken by Swathi and Shivani to complete Job-B is 3: 4. The difference between their wages is Rs. 300

LCM of 25 and 30 = 150

Total work = 150 units

Swathi's work per day = 5 units

Swathi's 80% efficiency =  $\frac{5 \times 80}{100} = 4$  units

Shivani's work per day = 6 units

Shivani's 75% efficiency =  $\frac{6 \times 75}{100} = 4.5$  units

According to the question,

$$(3x * 4) + (4x * 4.5) = 150$$

$$12x + 18x = 150$$

$$30x = 150 \Rightarrow x = 5$$

Number of days worked by Swathi and Shivani is 15

and 20 days respectively.

Swathi's 15 days' work =  $4 * 15 = 60$  units

Shivani's 20 days' work =  $20 * 4.5 = 90$  units

Difference between the total units done Shivani and

Swathi =  $90 - 60 = 30$  units

Amount received to complete 30 units of total work = 300

Amount received to complete 150 units of total work =  $\frac{300}{30} \times 150 = \text{Rs. } 1500$

**Statement II:** Shivani started working to complete Job-B. After 6 days swathi also joins with her and increased her efficiency by 20%. Swathi left the work 5 days before the work was completed and get Rs. 8400 as wage.

LCM of 25 and 30 = 150

Total work = 150 units





Shivani's work per day = 6 units

Swathi's work per day = 5 units

Swathi's 120% efficiency =  $\frac{5 \times 120}{100} = 6$  units

Total number of days worked by Shivani be x and

Swathi be (x - 11)

According to the question,

$$(x * 6) + ((x-11) * 6) = 150$$

$$6x + 6x - 66 = 150$$

$$12x = 216$$

$$X = 18 \text{ days}$$

Total work done by Shivani =  $6 * 18 = 108$  units

Total work done by Swathi =  $(18 - 11) * 6 = 42$  units

Amount received by Swathi to complete 42 units is 8400

Total amount to complete 150 units =  $8400/42 * 150 = \text{Rs. } 30000$

**18. Answer:** B

**Explanation: Statement I:** Shivani started working to complete Job-A and after 5 days Janani joins with her. The ratio of the number of days they worked to complete Job-A is 35: 12.

Here, there is no information about Janani's individual work. From that we cannot answer the given question.

**Statement II:** Sumi is 25% more efficient than Swathi to complete Job-A. They worked alternatively starting with Sumi to complete Job-A.

Efficiency ratio of Sumi to Swathi = 125: 100 = 5: 4

Days ratio of Sumi to Swathi = 4: 5

Number of days taken by Sumi alone to complete the whole work =  $(\frac{25}{5}) * 4 = 20$  days

LCM of 25 and 20 = 100

Total work = 100 units





$$\text{Swathi's work per day} = \frac{100}{25} = 4 \text{ units}$$

$$\text{Sumi's work per day} = \frac{100}{20} = 5 \text{ units}$$

Work done by Swathi and Sumi 2 days = 9 units

Work done by Swathi and Sumi 22 days =  $9 \times 11 = 99$  units

Remaining =  $100 - 99 = 1$  unit

$$\text{Required number of days} = 22 + \frac{1}{5} = 22 \frac{1}{5} \text{ days}$$

**19. Answer:** B

**Explanation: Statement I:** Shivani and Krish started working to complete Job-D and the ratio of the number of days worked by Shivani to Krish is 5: 2.

Number of days worked by Shivani and Krish is  $5x$  and  $2x$  respectively.

Here, there is no information about Krish's individual work. From that we cannot answer the given question.

**Statement II:** Shivani and Krish completes the Job- B in  $\left(\frac{375}{88}\right)$  days less than the total number of days taken by Shivani and Swathi working together till the work completed.

LCM of 30 and 25 = 150

Total work = 150 units

Swathi's per day work = 5 units

Shivani's per day work = 6 units

Total number of days taken by Swathi and Shivani to complete the whole work =  $\frac{150}{11}$  days

Total number of days taken by Shivani and Krish to complete the whole work

$$= \frac{150}{11} - \frac{375}{88}$$

$$= \frac{875}{88}$$

$$\text{Krish one day work} = \frac{88}{875} - \frac{1}{25} = \frac{11}{165}$$

Statement II alone is sufficient to answer the given question.



20. Answer: E

**Explanation: Statement I:** Shivani started working to complete Job C and after 4 days, Janavi joins with him and after few days Janavi replaced by Kamali. The remaining work was completed in 5 days.

From question there is no information about Kamali and Janavi alone to complete the whole work.

Statement I alone is not sufficient to answer the given question.

**Statement II:** Janavi and Kamali started working together to complete Job-B and completed the work same as the number of days taken by Shivani and Swathi working together.

From question there is no information about Kamali and Janavi alone to complete the whole work.

Statement II alone is not sufficient to answer the given question.

21. Answer: A

**Explanation:** In 2013 =  $(\frac{80}{100}) \times 30000 = 24000$

In 2014 =  $(\frac{65}{100}) \times 35000 = 22750$

In 2015 =  $(\frac{82}{100}) \times 42000 = 34440$

In 2016 =  $(\frac{78}{100}) \times 28000 = 21840$

In 2017 =  $(\frac{85}{100}) \times 48000 = 40800$

Average =  $(\frac{24000 + 22750 + 34440 + 21840 + 40800}{5}) = 28766$

22. Answer: C

**Explanation: From Statement I,**

Defective product in 2017 =  $(\frac{80}{100}) * (\frac{18}{100}) * 42000 = 6048$

Non defective product in 2017 =  $48000 - 6048 = 41952$

Required ratio =  $6048 : 41952 = 63 : 437$

**From Statement II,**

Non defective product in 2017 =  $\frac{30000}{2} = 15000$

Defective product in 2017 =  $48000 - 15000 = 33000$

Required ratio =  $15000 : 33000 = 5 : 11$



Either I or II is sufficient to answer the question.

**23. Answer:** C

**Explanation:** From quantity I,

$$\text{Product which is going to manufactured in 2018} = \left(\frac{120}{100}\right) * 28000 = 33600$$

$$\text{Unsold product in 2018} = \left(\frac{3}{7}\right) * 33600 = 14400$$

**From quantity II,**

The non-defective product of the company in the year 2014

$$= > \left(\frac{80}{100}\right) * \text{the number of product sold in 2013}$$

$$= > \left(\frac{80}{100}\right) * 30000 * \left(\frac{80}{100}\right) = 19200$$

$$\text{Defective product in 2014} = 35000 - 19200 = 15800$$

$$\text{Number unsold product in 2018} = 15800$$

**Quantity I < Quantity II**

**24. Answer:** B

**Explanation:** Difference of sold and unsold product in 2014 =  $\left(\frac{30}{100}\right) * 35000 = 10500$

$$\text{Difference of sold and unsold product in 2015} = \left(\frac{64}{100}\right) * 42000 = 26880$$

$$\text{Sum} = 10500 + 26880 = 37380$$

$$\text{Unsold product in 2017} = \left(\frac{15}{100}\right) * 48000 = 7200$$

$$\text{Unsold product in 2016} = \left(\frac{22}{100}\right) * 28000 = 6160$$

$$\text{Unsold product in 2013} = \left(\frac{20}{100}\right) * 30000 = 6000$$

$$\text{Total} = 7200 + 6160 + 6000 = 19360$$

$$\text{Required percentage} = \left[\frac{(37380 - 19360)}{19360}\right] * 100 = 93\%$$

**25. Answer:** C

**Explanation:** Average of products manufactured =  $\left(\frac{35000 + 28000 + 48000}{3}\right) = 37000$

**26. Answer:** C



**Explanation:** Let, required number of days = n

$$\frac{5}{25} + \frac{n}{30} + \frac{n}{50} = 1$$

$$\frac{1}{5} + \frac{(5n + 3n)}{150} = 1$$

$$\frac{(8n)}{150} = 1 - \frac{1}{5}$$

$$\frac{(8n)}{150} = \frac{5 - 1}{5}$$

$$n = \frac{150}{8} \times \frac{4}{5}$$

n = 15 days

**27. Answer:** B

**Explanation:** Efficiency of Murali =  $\frac{1}{35}$

Efficiency of Tinku =  $\frac{1}{40}$

Efficiency of Surbhi =  $\frac{1}{20}$

Efficiency of Sneha =  $\frac{1}{40}$

Required ratio =  $(\frac{1}{35} + \frac{1}{40}) : (\frac{1}{20} + \frac{1}{40})$

$$= \frac{(8 + 7)}{280} : \frac{2 + 1}{40}$$

$$= \frac{15}{280} : \frac{3}{40}$$

= 5:7

**28. Answer:** B

**Explanation:** Part of work done in 2 days =  $\frac{1}{20} + \frac{1}{35}$

=> Part of work done in 2 days =  $\frac{(7 + 4)}{140}$

=> Part of work done in 2 days =  $\frac{11}{140}$

=> Part of work done in 2 x 12 days =  $\frac{11}{140} \times 12$





$$\Rightarrow \text{Part of work done in 24 days} = \frac{132}{140} = \frac{33}{35}$$

$$\text{Remaining work} = 1 - \frac{33}{35} = \frac{35-33}{35} = \frac{2}{35}$$

$$\text{Work done in 25th day by Narayan} = \frac{1}{20}$$

$$\text{Remaining work} = \frac{2}{35} - \frac{1}{20} = \frac{8-7}{140} = \frac{1}{140}$$

Remaining work will be done by Jiya.

Let, number of days taken by Jiya to complete the remaining part of the work = n

$$\frac{n}{35} = \frac{1}{140}$$

$$\Rightarrow n = \frac{35}{140}$$

$$\Rightarrow n = \frac{1}{4}$$

Hence, required number of days =  $25\left(\frac{1}{4}\right)$  days TM

**29. Answer:** B

**Explanation:** Let, required number of days = n

$$N\left(\frac{1}{20} + \frac{1}{40} + \frac{1}{35} + \frac{1}{30} + \frac{1}{50}\right) = 1$$

$$\Rightarrow n\left(\frac{210 + 105 + 120 + 140 + 84}{4200}\right) = 1$$

$$\Rightarrow n = \frac{4200}{659} \text{ Days}$$

**30. Answer:** C

**Explanation:** Let, required number of days = n

$$\frac{4}{30} + \frac{4}{20} + \frac{n}{40} = 1$$

$$\Rightarrow \frac{2}{15} + \frac{1}{5} + \frac{n}{40} = 1$$

$$\Rightarrow \frac{n}{40} = 1 - \frac{2}{15} - \frac{1}{5}$$

$$\Rightarrow \frac{n}{40} = \frac{15-2-3}{15}$$

$$\Rightarrow n = \frac{40 \times 10}{15}$$



$$\Rightarrow n = \frac{80}{3} \text{ days}$$

**31. Answer:** C

**Explanation:** Number of students in school P =  $\frac{24}{100} \times 8000 = 1920$

$$\text{Number of local students in school P} = \frac{5}{8} \times 1920 = 1200$$

$$\text{Number of local girls in school P} = \frac{40}{100} \times 1200 = 480$$

$$\text{Number of local boys in school P} = 1200 - 480 = 720$$

$$\text{Required difference} = 720 - 480 = 240$$

**32. Answer:** B

**Explanation:** Total number of students in school Q =  $\frac{30}{100} \times 8000 = 2400$

$$\text{Number of local students in school Q} = \frac{3}{5} \times 2400 = 1440$$

$$\text{Total number of students in school S} = \frac{12}{100} \times 8000 = 960$$

$$\text{Number of non-local students in school S} = \frac{3}{4} \times 960 = 720$$

$$\text{Required ratio} = 1440 : 720 = 2 : 1$$

**33. Answer:** A

**Explanation:** Number of students in school R =  $\frac{18}{100} \times 8000 = 1440$

$$\text{Number of girls in school R} = \frac{4}{9} \times 1440 = 640$$

$$\text{Number of local students in school R} = \frac{5}{9} \times 1440 = 800$$

$$\text{Number of local girls in school R} = \frac{60}{100} \times 800 = 480$$

$$\text{Number of non-local girls in school R} = 640 - 480 = 160$$

**34. Answer:** C

**Explanation:** Total number of students in school T =  $\frac{16}{100} \times 8000 = 1280$

$$\text{Number of local students in school T} = \frac{3}{8} \times 1280 = 480$$

$$\text{Total number of students in school S} = \frac{12}{100} \times 8000 = 960$$



$$\text{Number of local students in school S} = \frac{1}{4} \times 960 = 240$$

$$\text{Total number of students in school P} = \frac{24}{100} \times 8000 = 1920$$

$$\text{Number of local students in school P} = \frac{5}{8} \times 1920 = 1200$$

$$\text{Total number of local students in school T and school S together} = 480 + 240 = 720$$

$$\text{Required percentage} = \frac{(1200 - 720)}{1200} \times 100$$

$$= \frac{480}{1200} \times 100$$

$$= 40\% \text{ less}$$

**35. Answer:** B

**Explanation:** Total number of students in school P =  $\frac{24}{100} \times 8000 = 1920$

$$\text{Number of non-local students in school P} = \frac{3}{8} \times 1920 = 720$$

$$\text{Total number of students in school Q} = \frac{30}{100} \times 8000 = 2400$$

$$\text{Number of non-local students in school Q} = \frac{2}{5} \times 2400 = 960$$

$$\text{Total number of students in school R} = \frac{18}{100} \times 8000 = 1440$$

$$\text{Number of non-local students in school R} = \frac{4}{9} \times 1440 = 640$$

$$\text{Total number of students in school S} = \frac{12}{100} \times 8000 = 960$$

$$\text{Number of non-local students in school S} = \frac{3}{4} \times 960 = 720$$

$$\text{Total number of students in school T} = \frac{16}{100} \times 8000 = 1280$$

$$\text{Number of non-local students in school T} = \frac{5}{8} \times 1280 = 800$$

$$\text{Required sum} = 720 + 960 + 640 + 720 + 800 = 3840$$

**36. Answer:** B

**Explanation:** Total mobiles exported by company D and F =  $35000 \times 2$

$$= 70000$$

$$\text{Mobile exported by company D in 2016} = \frac{30}{100} \times 35000 = 10500$$





$$\text{Mobile exported by company D in 2017} = \frac{10500}{2} = 5250$$

$$\text{Mobile exported by company F} = 70000 - 5250 = 64750$$

Percentage of production exported by company F in 2017

$$= > \frac{64750}{90000} * 100 = 72\%$$

**37. Answer:** B

**Explanation:** Mobile exported by company E in 2017 =

$$40000 * \frac{70}{100} = 28000$$

$$\text{Mobile exported by company E in 2016} = 50000 - 28000 = 22000$$

$$\text{Required \%} = \left( \frac{22000}{80000} \right) * 100 = 27.5 \%$$

**38. Answer:** D

**Explanation:** Total number of mobiles exported by company A in 2016 and 2017

$$= > \left( \frac{40}{100} \right) * 20000 + \left( \frac{60}{100} \right) * 50000$$

$$= > 8000 + 30000 = 38000$$

Mobile exported by company C in 2016 and 2017

$$= > 38000 * \left( \frac{3}{2} \right) = 57000$$

Mobile exported by company C in 2017

$$= > 57000 - 26000 * \left( \frac{20}{100} \right)$$

$$= > 51800$$

$$\text{Percentage of export by company C in 2017} = \frac{51800}{80000} * 100 = 64.75 \%$$

**39. Answer:** D

**Explanation:** Number of defective mobiles exported by B in 2016

$$= > 45000 * \left( \frac{42}{100} \right) * \left( \frac{20}{100} \right) = 3780$$

Number of defective mobiles exported by company B in 2017

$$= > \left( \frac{3780}{7} \right) * 5 = 2700$$



Number of mobiles exported by company B

$$= > \left(\frac{2700}{113.5}\right) * 100 = 20000$$

Percentage of mobile exported by company B in 2017

$$= > \left(\frac{20000}{30000}\right) * 100 = 66.67 \%$$

**40. Answer:** C

**Explanation:** Mobile exported by A, B and D in 2016

$$= > 20000 * \left(\frac{40}{100}\right) + 45000 * \left(\frac{42}{100}\right) + 35000 * \left(\frac{30}{100}\right)$$

$$= > 8000 + 18900 + 10500 = 37400$$

Mobile exported by company A and E in 2017

$$= > 50000 * \left(\frac{60}{100}\right) + 40000 * \left(\frac{70}{100}\right)$$

$$= > 30000 + 28000 = 58000$$

$$\text{Required difference} = 58000 - 37400 = 20600$$

**41. Answer:** B

**Explanation:** Let C takes x hours to fill the cistern,

According to the question:

$$\frac{4}{24} + \frac{4}{x} + \frac{5}{x} + \frac{5}{30} = 1$$

$$= > \frac{1}{6} + \frac{9}{x} + \frac{1}{6} = 1$$

$$= > \frac{2}{6} + \frac{9}{x} = 1$$

$$= > \frac{1}{3} + \frac{9}{x} = 1$$

$$= > \frac{9}{x} = 1 - \left(\frac{1}{3}\right)$$

$$= > \frac{9}{x} = \frac{2}{3}$$

$$= > x = \frac{27}{2} = 13 \frac{1}{2} \text{ hours}$$

C alone can fill the cistern in  $13 \frac{1}{2}$  hours



**42. Answer:** D

**Explanation:** Let D should be closed after x hours,  $\frac{x}{30} + \frac{x}{45} + \frac{20}{45} = 1$

$$\Rightarrow (3x + 2x)/90 = 1 - \left(\frac{4}{9}\right)$$

$$\Rightarrow \frac{5x}{90} = \frac{5}{9}$$

$$\Rightarrow x = 10 \text{ hours}$$

D should be closed after 10 hours

**43. Answer:** D

**Explanation:** C takes half of the time taken by F to fill the cistern

$$\Rightarrow C : F = 1 : 2$$

F takes half of the time taken by B to fill the cistern

$$\Rightarrow F : B = 1 : 2$$

The ratio of C, F and B taken to fill the cistern = 1: 2:4 (x, 2x, 4x)

According to the question:

$$\frac{1}{x} + \frac{1}{2x} + \frac{1}{4x} = \frac{1}{48}$$

$$\Rightarrow \frac{(4 + 2 + 1)}{4x} = \frac{1}{48}$$

$$\Rightarrow \frac{7}{4x} = \frac{1}{48}$$

$$\Rightarrow 4x = 48 \times 7$$

$$\Rightarrow x = 84 \text{ hours}$$

Time taken by F to fill the cistern =  $2 \times 84 = 168$  hours

**44. Answer:** B

**Explanation:** Part of the tank filled in 2 hours =  $\frac{1}{24} + \frac{1}{30} = \frac{3}{40}$

$$\Rightarrow \text{Part of the tank filled in 26 hours} = \left(\frac{3}{40}\right) \times 13 =$$

$$39/40$$

$$\text{Remaining part} = 1 - \frac{39}{40} = \frac{1}{40}$$



Time taken by A to fill the remaining part,

$$= > \left(\frac{1}{40}\right) * 24 = \frac{3}{5}$$

$$\text{Total time} = 26 + \frac{3}{5} = 26 \frac{3}{5} \text{ hours}$$

**45. Answer:**

**Explanation:** Let the time taken by F to fill the cistern be x,

According to the question,

$$\left(\frac{1}{24}\right) + \left(\frac{1}{30}\right) + \left(\frac{1}{x}\right) = \left(\frac{1}{8}\right)$$

$$\left(\frac{1}{x}\right) = \left(\frac{1}{8}\right) - \left[\left(\frac{1}{24}\right) + \left(\frac{1}{30}\right)\right]$$

$$\left(\frac{1}{x}\right) = \left(\frac{1}{8}\right) - \left(\frac{3}{40}\right)$$

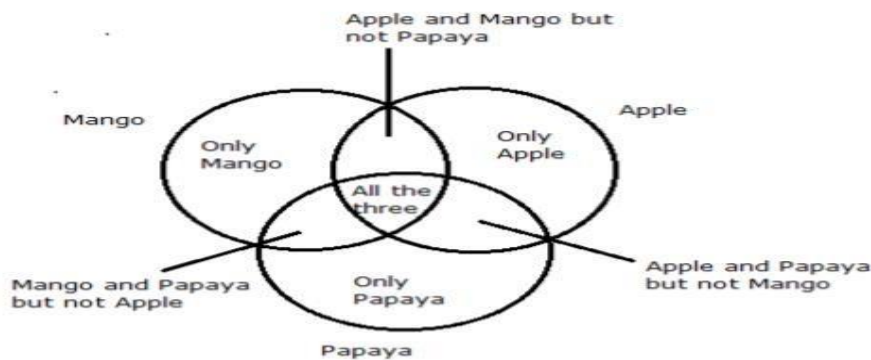
$$\left(\frac{1}{x}\right) = \frac{2}{40}$$

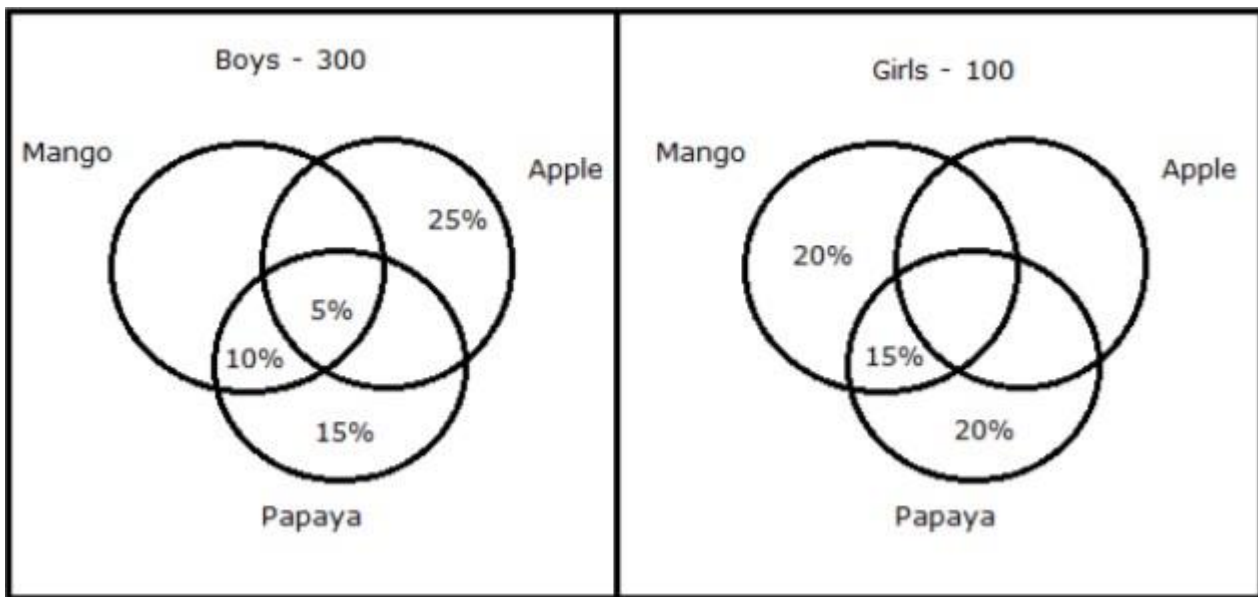
$$\frac{1}{x} = \frac{1}{20}$$

F alone to fill the cistern is 20 hours

**46. Answer:**

**Explanation [46-50]:**





Number of girls like Apple = 100 – (Number of girls not like apple)

$$= 100 - [100 \times (20 + 15 + 20) \%]$$

$$= 100 - \left( \frac{100 \times 55}{100} \right)$$

$$= 100 - 55 = 45$$

**From statement I,**

Number of boys like Mango = 300 – (Number of boys not like Mango)

$$= 300 - [300 \times (15 + 20 + 10) \%]$$

$$= 300 - \left( \frac{300 \times 45}{100} \right)$$

$$= 300 - 135$$

$$= 165$$

Required ratio = 165: 45

$$= 11: 5$$

Hence, Statement I alone is sufficient to answer the question

**From statement II,**

Number of boys like Mango = 300 – (Number of boys not like Mango)

$$= 300 - [300 \times (20 + 10 + 5 + \text{No of boys like Mango \& Apple but not Papaya})]$$



From that, we could not able to find the ratio because there is no information about the number of boys like Mango & Apple but not Papaya.

Hence, Statement II alone is not sufficient to answer the question

**47. Answer:** D

**Explanation:** 20% of girls like Mango and Apple and 15% of girls like Only Apple. 50% of boys like Mango.

**Boys:**

$$(x+y+5\%+10\%) = 50\%$$

$$(x+y) = 50\% - 15\% = 35\%$$

$$=> z = 100\% - (10\%+15\%+5\%+25\%+35\%)$$

$$=> z = 100\% - 90\% = 10\%$$

**Girls:**

$$(a + b) = 20\%$$

$$=> c = 100\% - (20\%+15\%+20\%+15\%+20\%)$$

$$=> c = 100\% - 90\% = 10\%$$

Quantity I: Find the number of boys like Apple and Papaya but not Mango

Required total = z = 10% of 300

$$= 10/100 * 300 = 30$$

**Quantity II:** Find the number of girls like Apple and

Papaya but not Mango

Required total = c = 10% of 100

$$= 10/100 * 100 = 10$$

Quantity III: If the number of girls like Mango and Apple but not Papaya is 2 more than the number of girls like Apple and Papaya but not Mango, then find the number of girls like all the three fruits.

Number of girls like Mango and Apple =  $20/100 * 100 = 20$

$$(a + b) = 20$$



The number of girls like Mango and Apple but not Papaya = 2 + the number of girls like Apple and Papaya but not Mango

$$\Rightarrow a = c + 2$$

$$\Rightarrow a = \left( \frac{10}{100 \times 100} \right) + 2$$

$$\Rightarrow a = 12$$

**Quantity I > Quantity II < Quantity III**

**48. Answer:** A

**Explanation:** Number of boys like at least two fruits = 300 – (Boys like only one fruit)

$$= 300 - [300 \times (20\% + 15\% + 25\%)]$$

$$= 300 - \left( \frac{300 \times 60}{100} \right)$$

$$= 300 - 180 = 120$$

Number of girls like at least two fruits = 100 – (Girls like only one fruit)

$$= 100 - [100 \times (20 + 15 + 20) \%$$

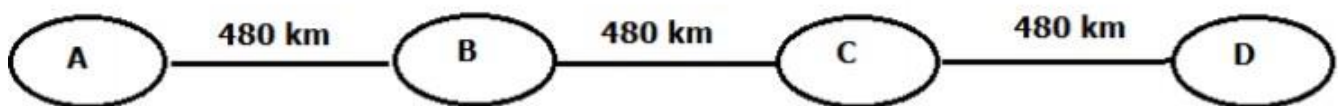
$$= 100 - \left( \frac{100 \times 55}{100} \right)$$

$$= 100 - 55 = 45$$

$$\text{Required difference} = 120 - 45 = 75$$

**49. Answer:** B

**Explanation:**



Train P covered  $(3 \times 40) = 120$  km at the end of 3 hours

Train Q covered  $(3 \times 60) = 180$  km at the end of 3 hours

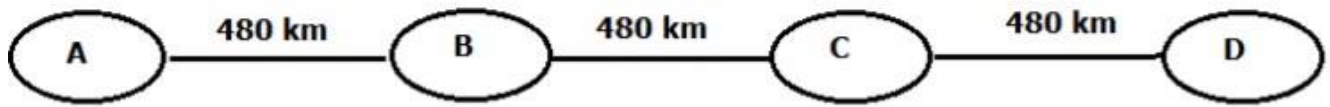
**50. Answer:** D

**Explanation:**

$$\text{Total distance} = \frac{480 \times 3}{40 + 60} = \frac{1440}{100}$$



= 14.4 hours (or) 14 hours 24 minutes







## Stay Connected With SPNotifier



TM



**Quantitative Aptitude EBooks**

**Reasoning Ability EBooks**

**English Language EBooks**