



Data Interpretation Questions for Upcoming Exams



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**24 Sets of Data Interpretation
120 Questions
with explanation**



Directions (1-5): Study the following table carefully. Some values are missing. Complete that based on given information in each question to answer the question.

The table shows the number of employees in an organization in 5 different cities with total employees being 2130 in the organization. Table also shows the percentage of employees working in 4 departments – HR, Finance, Software and Accounts with each employee in only 1 department.

Class	Employees	HR	Finance	Software	Accounts
Delhi	450		18%		28%
Mumbai	380	15%		30%	
Bengaluru		18%	20%		32%
Hyderabad			25%	18%	35%
Gurgaon	350	20%	22%		20%

1. **What is the total number of employees in Mumbai and Gurgaon who work in Software department?**

A) 292 B) 226 C) 285 D) 247 E) None of these

D) 247

Explanation:

In Gurgaon, Software % = $100 - (20 + 22 + 20) = 38\%$

Required Ans = $(30/100) \times 380 + (38/100) \times 350$

2. **If in Delhi, employees who work in Accounts department are 40% more than employees who work in HR department, then what is the number of employees who work in Software department in Delhi?**

A) 133 B) 153 C) 176 D) 147 E) None of these

B) 153

Explanation:

Let % of employees who work in HR in Delhi is x%. So

$[28/100 \times 450 - x/100 \times 450] / [x/100 \times 450] \times 100 = 40$

Which is $[(28-x)/x] \times 100 = 40$

Solve, $x = 20$

So % of employees who work in Software is $100 - (20 + 18 + 28) = 34\%$

So required ans = $34/100 \times 450$



3. If number of employees in Bengaluru is 10% less than number of employees in Hyderabad, then what is the difference between number of employees who work in Accounts department in these 2 cities and who work in Finance department in these 2 cities?

A) 122 B) 104 C) 97 D) 135 E) 116

B) 104

Explanation:

Total employees in Bengaluru and Hyderabad = $2130 - (450 + 380 + 350) = 950$

So if in Hyderabad, employees is x , then in Bengaluru = $90/100 * x$

So $x + 90x/100 = 950$

Solve, $x = 500$, so in Hyderabad = 500, and in Bengaluru = $90/100 * 500 = 450$

So required answer = $[32/100 * 450 + 35/100 * 500] - [20/100 * 450 + 25/100 * 500]$

Or = $12/100 * 450 + 10/100 * 500$

4. If a same criterion as taken in question 3 is taken, in which city the total employees who work in Finance and Accounts departments is more?

A) Delhi B) Mumbai C) Bengaluru D) Hyderabad E) Gurgaon

D) Hyderabad

Explanation:

Delhi = $(18 + 28)/100 * 450 = 207$

Mumbai = $55/100 * 380 = 209$

Bengaluru = $(20 + 32)/100 * 450 = 234$

Hyderabad = $(25 + 35)/100 * 500 = 300$

Gurgaon = $(22 + 20)/100 * 350 = 147$

5. If in Mumbai, number of employees who work in Accounts department is 19 more than the number of employees who work in Software department in Gurgaon, then what is the number of employees who work in Finance department in Mumbai?

A) 57 B) 60 C) 49 D) 62 E) 55

A) 57

Explanation:

% of employees who work in Software in Gurgaon = $100 - (20 + 22 + 20) = 38\%$

Number of employees who work in Software in Gurgaon = $38/100 * 350 = 133$

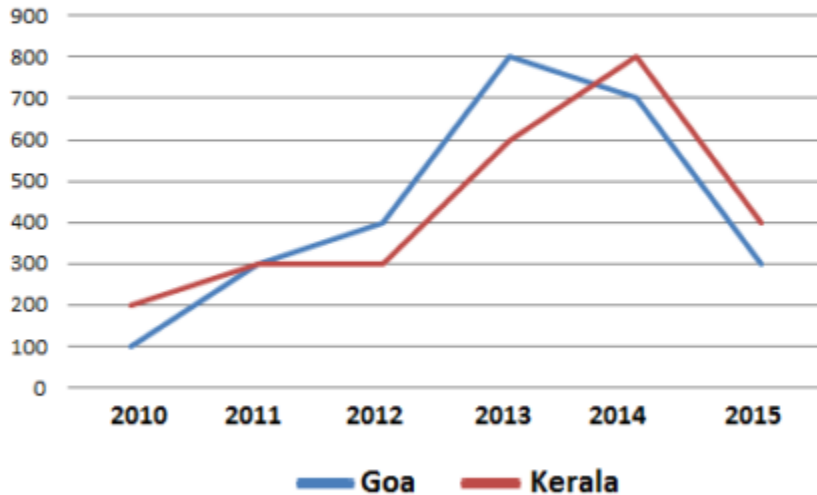
So number of employees who work in Accounts in Mumbai is $133 + 19 = 152$

So number of employees who work in Finance in Mumbai = $380 - [152 + ((15 + 30)/100 * 380)] = 57$

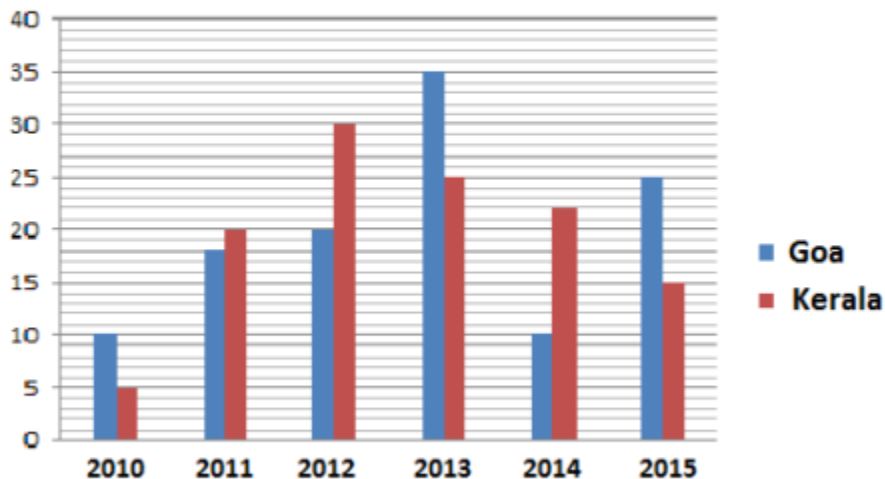


Directions (6- 10): Study the following charts carefully and answer the questions that follow:

Number of students who took part in different competitions from two states



Percentage of students who won medals from different states



6. How many students from Goa won medals in the years 2010, 2012 and 2015 together?

- A) 120 B) 125 C) 165 D) 132 E) 155

C) 165

Explanation:



In 2010: $10/100 * 100 = 10$

In 2012: $20/100 * 400 = 80$

2015: $25/100 * 300 = 75$

$10+80+75$

7. **Number of students from Goa who got medals is approximately what percent of number of students from Kerala who got medals?**

A) 98 B) 143 C) 104 D) 100 E) 116

C) 104

Explanation:

Some info take from above question. Next:

Number of students from Goa who got medals in 2011 = $18/100 * 300$

Number of students from Goa who got medals in 2013 = $35/100 * 800$

Similarly find all from Kerala also

From Goa = 569

From Kerala = 546

So % = $569/546 * 100$

8. **What is the difference between number of students who do not won medals in the year 2010 and 2011 together from Kerala and who do not won medals in the year 2014 and 2015 together from Goa?**

A) 568 B) 425 C) 320 D) 438 E) 505

B) 425

Explanation:

who do not won medals in the year 2010 and 2011 together from Kerala = $95/100 * 200 + 80/100 * 300 = 430$

who do not won medals in the year 2014 and 2015 together from Goa = $90/100 * 700 + 75/100 * 300 = 855$

9. **What is the ratio of the total number of students who do not won medals in the years 2012 and 2013 from Goa to same years from Kerala?**

A) 32 : 49 B) 11 : 15 C) 15 : 22 D) 21 : 23 E) 14 : 11

E) 14 : 11

Explanation:

From Goa in 2012 and 2013 = $80/100 * 400 + 65/100 * 800 = 840$

From Kerala in 2012 and 2013 = $70/100 * 300 + 75/100 * 600 = 660$



10. What is the total number of students who won medals from Goa in the year 2013 and who do not won medals from Kerala in the year 2012?

- A) 440 B) 470 C) 415 D) 490 E) 480

D) 490

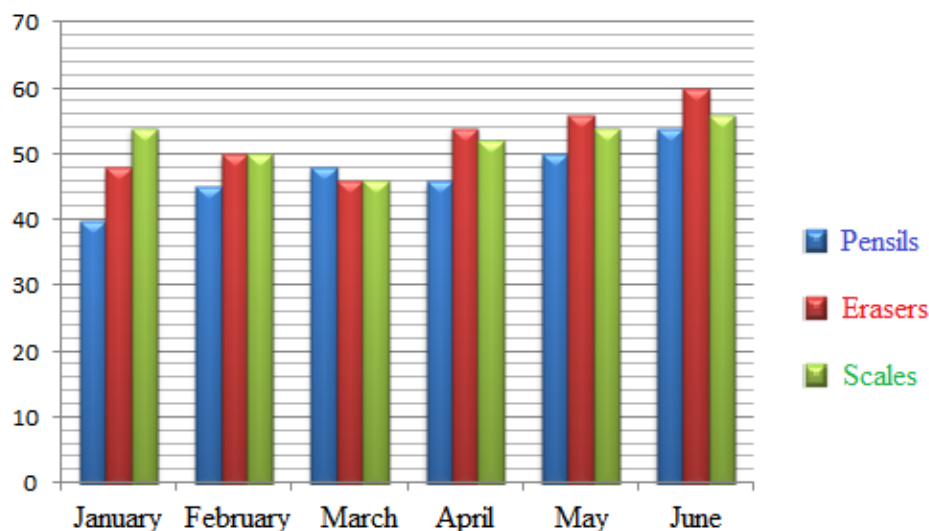
Explanation:

who won medals from Goa in the year 2013 = 280

who won medals from Kerala in the year 2012 = 210

$280 + 210$

Directions (11-15): The following bar graph shows the production (in thousands) of different products in a company in 6 different months.



11. In how many months in the percentage rise/fall in production of Erasers from the previous month less than 10%?

- A) 1 B) 3 C) 4 D) 2 E) None of these

C) 4

Explanation:

For Feb = $(50 - 48) / 48 \times 100 = 4.17\%$

Similarly find for all months

For march = -8% , april = 17.40% , may = 3.7% and june = 7.14%

So 4 months



12. The production of pencils for the given period is approximately what percentage of the total production of all the three products during the given period?

- A) 23% B) 45% C) 17% D) 31% E) None of these

D) 31%

Explanation:

Production of pencils = 283 thousand

Total production of all = 909

So % = $283/909 \times 100$

13. What is the difference between the average production of scales in April, May and June and the average production of erasers from January to June?

- A) 1.22 B) 1.67 C) 1.97 D) 1.35 E) 1.16

B) 1.67

Explanation:

Average Scales in April, May, June = 54

Average erasers in all months = 52.33

Difference = 1.67

14. If in July, the production of pencils get increased by 12%, that of erasers get increased by 8% and that of scales get decreased by 5% over the previous month, find the total production of all the 3 products in July.

- A) 123.45 thousand B) 178.48 thousand C) 132.56 thousand
D) 142.42 thousand E) 138.67 thousand

B) 178.48 thousand

Explanation:

Pencils in July = $112/100 \times 54 = 60.48$

Erasers in July = $108/100 \times 60 = 64.80$

Scales in July = $95/100 \times 56 = 53.20$

So total = 178.48

15. If selling price of one pencil is Rs 8 and that of one scale is Rs 11, then what is the difference between the revenues of pencils and scales during the given months?

- A) 1174 thousand B) 1438 thousand C) 1624 thousand
D) 1238 thousand E) 1168 thousand

E) 1168 thousand

Explanation:

Total revenue of pencils = $283 \times 8 = \text{Rs}2264$ thousands

Total revenue of scales = $312 \times 11 = \text{Rs}3432$ thousands

Difference = Rs1168 thousands



Directions (16- 20): Study the following carefully and answer the questions that follow:

A school has a total of 3000 students in 5 different classes as 1, 2, 3, 4, and 5. The ratio of boys to girls in the school is 4 : 2 respectively. 14% of the boys are in class 1. 20% of the girls are in class 5. The ratio of boys to girls in class 1 is 4 : 6 respectively. One-eighth of the girls are in class 3. 44% of the boys are in class 4. Number of girls in class 4 is 20% of the boys in the same class. The remaining girls are in class 2. The total number of students in class 3 is 345. 24% of the boys are in class 2 and the remaining boys are in class 5.

16. The total number of students in class 3 is what percent of the total number of students in the school?

- A) 12.0% B) 12.5% C) 11.5% D) 13.2% E) 15.5%

C) 11.5%

Explanation:

Class 1 – B(280) G(420)

Class 2 – B(480) G(79)

Class 3 – B(220) G(125)

Class 4 – B(880) G(176)

Class 5 – B(140) G(200)

So req % = $(220+125)/3000 * 100$

17. How many boys are there in class 5?

- A) 98 B) 143 C) 130 D) 140 E) 116

D) 140

Explanation:

Class 1 – B(280) G(420)

Class 2 – B(480) G(79)

Class 3 – B(220) G(125)

Class 4 – B(880) G(176)

Class 5 – B(140) G(200)

18. The number of boys in class 5 is what percent of the number of boys in the school?

- A) 5% B) 7% C) 3% D) 4% E) 6%

B) 7%

Explanation:

Class 1 – B(280) G(420)

Class 2 – B(480) G(79)

Class 3 – B(220) G(125)

Class 4 – B(880) G(176)

Class 5 – B(140) G(200)

Req % = $140/2000 * 100$



19. Find the total number of girls in class 3 and class 4?

- A) 291 B) 315 C) 303 D) 301 E) 296

D) 301

Explanation:

Class 1 – B(280) G(420)

Class 2 – B(480) G(79)

Class 3 – B(220) G(125)

Class 4 – B(880) G(176)

Class 5 – B(140) G(200)

20. The number of girls in class 1 is what percent of the total number of girls in the school?

- A) 44% B) 47% C) 41% D) 42% E) 48%

D) 42%

Explanation:

Class 1 – B(280) G(420)

Class 2 – B(480) G(79)

Class 3 – B(220) G(125)

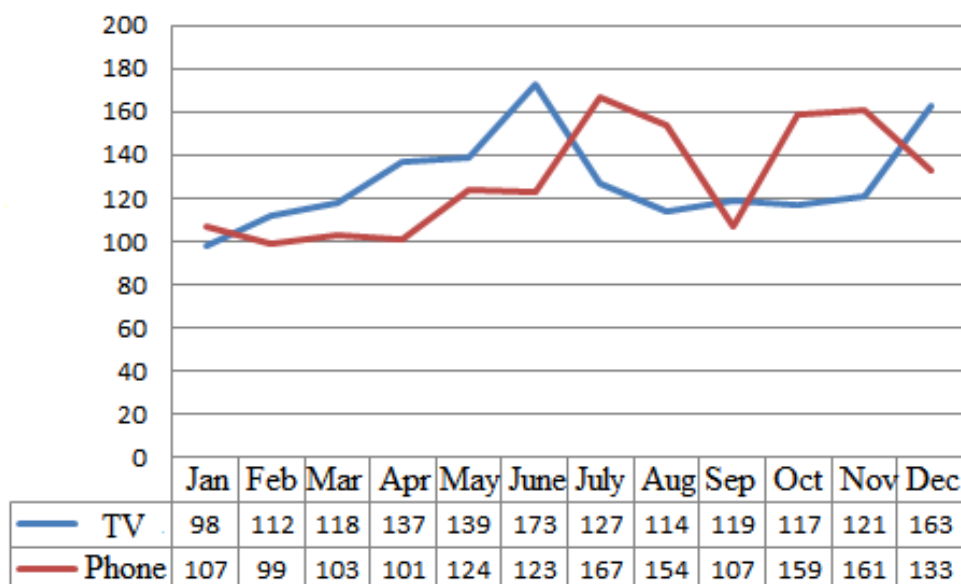
Class 4 – B(880) G(176)

Class 5 – B(140) G(200)

Req % = $420/1000 \times 100$

Directions (21 – 25): Study the following line chart carefully and answer the questions that follow:

The line chart shows the sales of TVs and
Mobiles (in thousands) of company ABC





21. What is the ratio of sales of Phones in first six months to the ratio of sales of TV during the same period?

- A) 260 : 233 B) 205 : 226 C) 234 : 243 D) 219 : 259 E) 213 : 256

Option D

Solution:

Sales of Phones in first six months = 657000

Sales of TV in first six months = 777000

22. In which months is the difference between the sales of the two products the same?

- A) Jan, July and Dec B) July, Aug and Nov C) Feb, June and Aug
D) July, Sep and Nov E) None of these

Option B

Solution:

Differences:

Jan = 9, Feb = 13, March = 15, April = 36, May = 15, June = 50, July = 40, Aug = 40, Sep = 12,
Oct = 42, Nov = 40, Dec = 30

23. If the people who buy Phones are 20% more than the people who buy TV, then total sales of which product is minimum?

- A) TV B) Phones C) Same for both products
D) Cannot be Determined E) Can be any product

Option B

Solution:

People who like TV = x , then who like Phones = $120/100 \times x = 1.2x$

Total sales of TV in all months = 1538 thousand

Total sales of Phones in all months = 1538 thousand

Sales of TV/person = $1538/x$ and

Sales of Phones/person = $1538/1.2x$

So Sales of Phones/person is minimum.

24. In which month from Mar, May, July, Sep and Nov is the % rise in sales of TV the maximum compared to preceding month?

- A) Mar B) May C) July D) Sep E) Nov

Option A

Solution:

$$\text{Mar} = 6/112 \times 100 = 5.35\%$$

Similarly, May = 1.46%, July decreased, Sep = 4.38%, Nov = 3.42%

25. The sales of TV in the months of July and Aug together in what approximately percent less than the sales of same in the months May and June?

- A) 11% B) 23% C) 16% D) 19% E) 26%

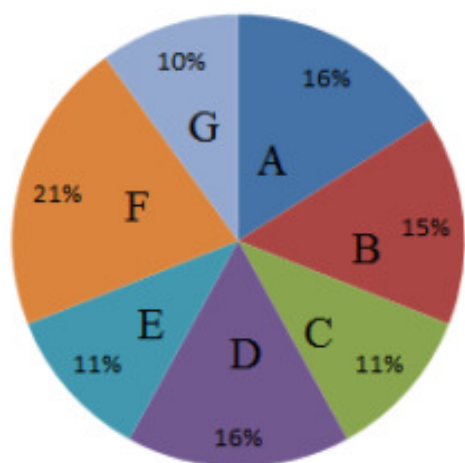
Option B

Solution:

$$[(139+173)-(127+114)] / (139+173) \times 100 = (312 - 241) / 312 \times 100 = 23\%$$

Directions (26- 30): Study the following carefully and answer the questions that follow:

Percentage of employees in
7 departments



Departments	% of Males
A	38
B	52
C	42
D	51
E	49
F	46
G	58

26. If the number of male employees in department A is 12160, what is the number of employees in department D?

- A) 29800 B) 28000 C) 32700 D) 34000 E) 32000

Option E

Solution:

$$38/100 \times x = 12160$$

So total employees in department A, $x = 32000$



Since % of employees in departments A and D is same
So employees in department D = 32000

27. In the number of employees in department D is 32000, then find the number of male employees in department B.

A) 16800 B) 14300 C) 15600 D) 14000 E) 11600

Option C

Solution:

$$16/100 \times x = 32000$$

So total employees in company, $x = 200,000$

$$\text{So male employees in B} = 52/100 \times 15/100 \times 200000$$

28. Find the ratio of male employees in department F to that in department C.

A) 21 : 11 B) 23 : 11 C) 25 : 13 D) 27 : 16 E) 19 : 9

Option B

Solution:

$$46 \times 21 : 42 \times 11$$

29. If the number of male employees in department A is 12160, then find the number of employees in department E.

A) 29100 B) 20100 C) 23400 D) 21000 E) 22000

Option E

Solution:

$$38/100 \times 16/100 \times x = 12160$$

So total employees in company, $x = 200,000$

$$\text{So employees in department E} = 11/100 \times 200,000 = 22,000$$

30. The number of employees in department B is 30, 000. If next year, the number of employees in departments B and G increase by 10% each, then find the number of male employees in department G next year.

A) 11560 B) 12760 C) 18340 D) 12540 E) 14360

Option B

Solution:

$$15/100 \times x = 30,000$$

So total employees in company in present year, $x = 200,000$

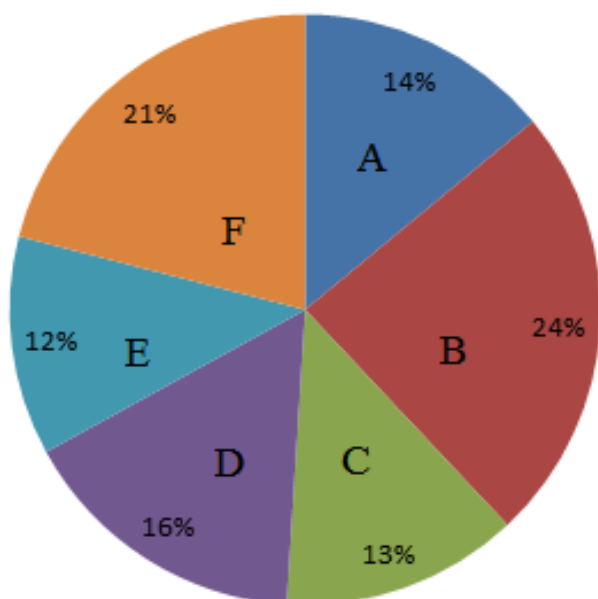


So total employees in G in present year = $10/100 \times 200,000 = 20,000$

So total employees in G in next year = $110/100 \times 20,000 = 22,000$

So male employees = $58/100 \times 22,000 = 12,760$

Directions (31 – 35): A survey is taken in 6 cities of a state. The pie chart shows the distribution of people in each city with total 8,40,000 people.



31. Number of people in city B is how much percent greater than the number of people in city D?

- A) 8% B) 50% C) 15% D) 35% E) 42%

Option B

Solution:

A = 117600, B = 201600, C = 109200, D = 134400, E = 100800, F = 176400

So here – $[(201600 - 134400) / 134400] \times 100 = 50\%$

32. What is the total number of people in cities C, E and F?

- A) 3,86,400 B) 3,45,670 C) 3,24,500 D) 3,67,400 E) 3,66,400

Option A

Solution:



A = 117600, B = 201600, C = 109200, D = 134400, E = 100800, F = 176400

33. What is the ratio between number of people in cities F and C together and that in B and E together?

- A) 16 : 17 B) 15 : 22 C) 17 : 20 D) 17 : 18 E) 18 : 23

Option D

Solution:

A = 117600, B = 201600, C = 109200, D = 134400, E = 100800, F = 176400

$176400 + 109200 : 201600 + 100800$

$2856 : 3024$

$17 : 18$

34. If there are 65% males in city B, 49% females in city D and 47% males in city E, then females in these cities form what percent of total number of people in these three cities?

- A) 52.33% B) 45.37% C) 32.56% D) 44.08% E) None of these

Option D

Solution:

A = 117600, B = 201600, C = 109200, D = 134400, E = 100800, F = 176400

Females in B, D, and E = $35/100 \times 201600 + 51/100 \times 134400 + 53/100 \times 100800 = 192528$

So % = $[192528 / (201600 + 134400 + 100800)] \times 100 = 44.08\%$

35. Number of people in city A is what percent of the number of people in city C?

- A) 111.91% B) 123.25% C) 107.69% D) 119.31% E) 126.22%

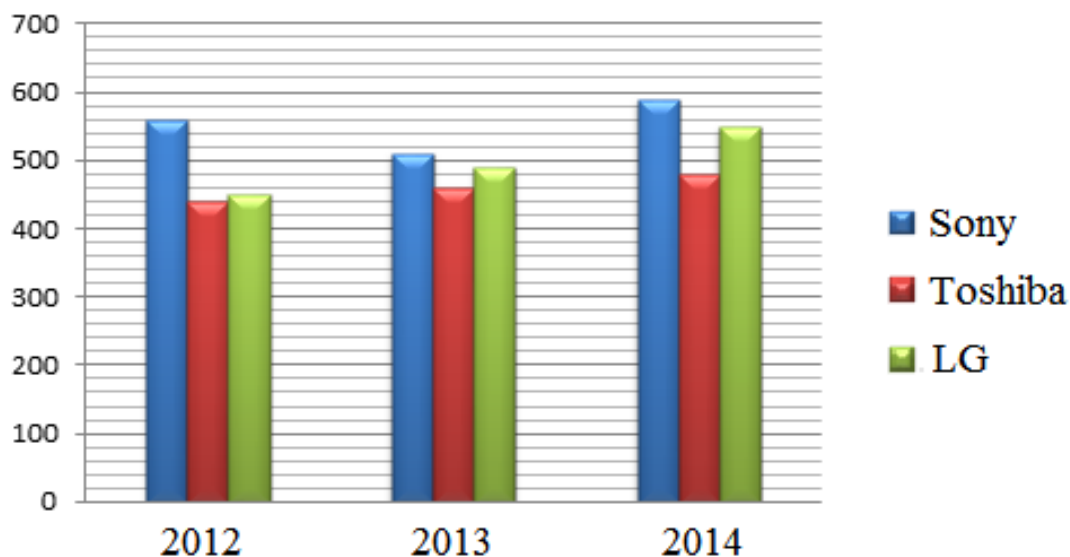
Option C

Solution:

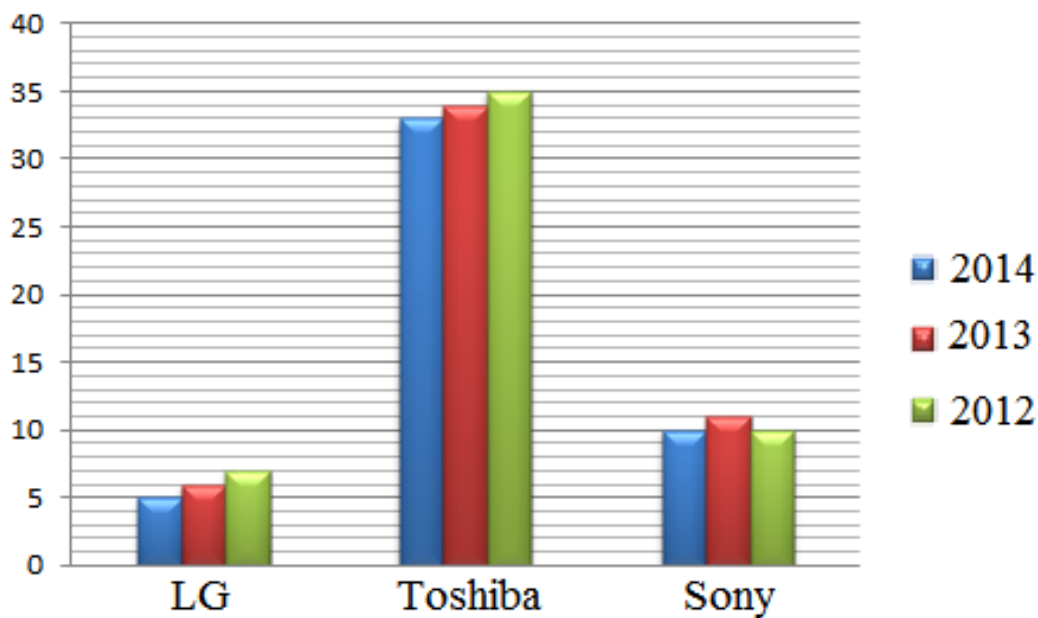
$14/13 \times 100$

Directions (36- 40): Study the following carefully and answer the questions that follow:

The bar graph shows the number of sales of Televisions (in Thousands) each year by three companies in 3 consecutive years.



The line chart shows the average price per television (in Thousands Rupees) for these three consecutive years.



36. How much money (in million) did Toshiba make for the year 2013?

- A) 19800 B) 18260 C) 12700 D) 15640 E) 12330

Option D

Solution:



In 2013, Toshiba sold = 460 thousand
Average price in 2013 is Rs 34
So total money is (34×460) million

37. What is the average number of Televisions sold per year over the given three years?

- A) 1680 B) 1430 C) 1560 D) 1400 E) 1510

Option E

Solution:

Sold in 2012 = $560 + 440 + 450 = 1450$

Sold in 2013 = $510 + 460 + 490 = 1460$

Sold in 2014 = $590 + 480 + 550 = 1620$

Total number sold in 3 years = $1450 + 1460 + 1620 = 4530$

So average = $4530/3 = 1510$

38. What percent of total money generated by selling Televisions from Toshiba in 2014?

- A) 61% B) 64% C) 52% D) 78% E) 56%

Option B

Solution:

Total money generated in 2014 by selling all = $590 \times 10 + 480 \times 33 + 550 \times 5 = 24490$ million

Total money generated in 2014 by selling Toshiba only = $480 \times 33 = 15840$ million

So % = $[15840/24490] \times 100 = 64\%$

39. What is the percent change in the average price of television in the year 2013 compared to the year 2012?

- A) 1.9% increased B) 2.9% decreased C) 1.9% decreased
D) 2% increased E) 3.0% decreased

Option C

Solution:

Avg price in 2012 = $(10 + 35 + 7)/3 = 17.33$

Avg price in 2013 = $(11 + 34 + 6)/3 = 17$

So % change = $[(17.33 - 17)/17.33] \times 100 = 1.9\%$ decreased

40. If in 2015, Sony wants to decrease the average price of its each Television by 10% then how many Televisions they have to sell (in thousands) so that the amount of money generated by selling Televisions remains unchanged compared to the previous year?

- A) 615.60 B) 655.50 C) 683.40 D) 625.40 E) 643.60



Option B

Solution:

In 2014, avg price of Sony is 10,000

So in 2015, after decreasing by 10%, price per TV becomes = $90/100 \times 10 = \text{Rs } 9$

Now, income generated by selling Sony in 2014 = $590 \times 10 = 5900$ million

So in years 2015, no of Sony TV sold is $5900/9 = 655.5$ thousand

Directions (41-45): Study the following table and answer the following:

Products	Sales (in lakhs) in 2012	Percentage growth in the sales over the previous years		
		2013	2014	2015
A	2	5	10	10
B	3	8	10	20
C	3.6	10	10	12
D	3	9	10	12

41. Find the difference between the sales of products A and B in the year 2015.

- A) 154320
- B) 173580
- C) 143420
- D) 185280
- E) 165890

Option B

Explanation:

Sales of A in 2015 = $2 \text{ lacs} \times 105/100 \times 110/100 \times 110/100 = 254100$

Sales of B in 2015 = $3 \text{ lacs} \times 108/100 \times 110/100 \times 120/100 = 427680$

So difference = $427680 - 254100 = 173580$

42. Find the ratio of sales of product C in 2014 to the sales of product D in 2015.

- A) 875 : 654
- B) 825 : 763
- C) 962 : 744
- D) 796 : 733
- E) None of these



Option B

Explanation:

Sales of C In 2014 = $3.6 \text{ lacs} \times 110/100 \times 110/100$

Sales of D In 2015 = $3 \text{ lacs} \times 109/100 \times 110/100 \times 112/100$

So ratio = $3.6 \text{ lacs} \times 110/100 \times 110/100 : 3 \text{ lacs} \times 109/100 \times 110/100 \times 112/100$

43. What is the percentage increase in sales of all the four products in 2014 as compared to 2012?

- A) 14.22
- B) 15.67
- C) 20.97
- D) 18.35
- E) 19.19%

Option E

Explanation:

Sales of A in 2014 = $2 \text{ lacs} \times 105/100 \times 110/100 = 231000$

Sales of B in 2014 = $3 \text{ lacs} \times 108/100 \times 110/100 = 356400$

Sales of C in 2014 = $3.6 \text{ lacs} \times 110/100 \times 110/100 = 435600$

Sales of D in 2014 = $3 \text{ lacs} \times 109/100 \times 110/100 = 359700$

So total sales in 2014 = 1382700

Total sales in 2012 = 1160000

So % increase = $(1382700 - 1160000)/1160000 \times 100 = 19.19\%$

44. Of all the products, which product showed the highest percentage increase in total sales at the of 2015 in four years?

- A) A
- B) B
- C) C
- D) D
- E) None of these

Option B

Explanation:

Sales of A in 2015 = $2 \text{ lacs} \times 105/100 \times 110/100 \times 110/100 = 254100$

Sales of B in 2015 = $3 \text{ lacs} \times 108/100 \times 110/100 \times 120/100 = 427680$

Sales of C in 2015 = $3.6 \text{ lacs} \times 110/100 \times 110/100 \times 112/100 = 487872$

Sales of D in 2015 = $3 \text{ lacs} \times 109/100 \times 110/100 \times 112/100 = 402864$

So

% increase in sales of product A = $(254100 - 200000)/200000 \times 100 = 27.05\%$



% increase in sales of product B = $(427680 - 300000) / 300000 * 100 = 42.56\%$

% increase in sales of product C = $(487872 - 360000) / 360000 * 100 = 35.52\%$

% increase in sales of product D = $(402864 - 300000) / 300000 * 100 = 34.28\%$

So maximum for B

45. If the ratio of defective to non-defective A products is 2 : 3 in 2012 while that of products C is 4 : 5 in same year, then what is the ratio of defective A products to non-defective B products in 2012?

- A) 1 : 4
B) 4 : 7
C) 3 : 7
D) 2 : 5
E) 2 : 7

Option D

Explanation:

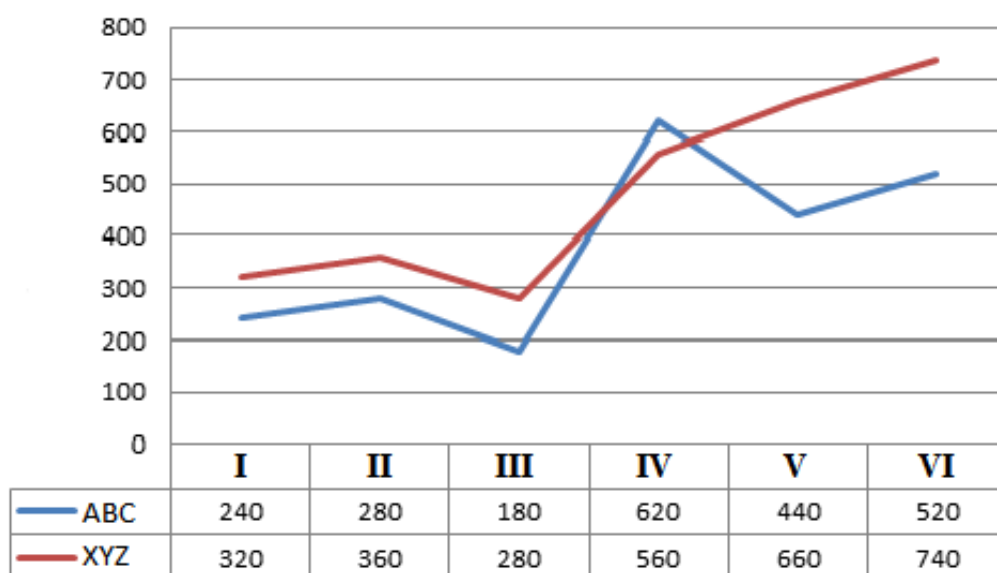
Number of defective A products in 2012 = $2/5 * 2,00,000 = 80,000$

Number of non-defective C products in 2012 = $5/9 * 3,60,000 = 2,00,000$

So required ratio = $80,000 : 2,00,000 = 2 : 5$

Directions (46- 50): Study the following chart carefully and answer the questions that follow:

The chart shows the number of students in six 6 classes of 2 different schools ABC and XYZ.





46. What is the difference between the students of class II and IV in school ABC and the students of class I and V in school XYZ?

- A) 90
- B) 120
- C) 80
- D) 50
- E) 110

Option C

Explanation:

II and IV in ABC = $280 + 620 = 900$

I and V in XYZ = $320 + 660 = 980$

47. What is the ratio of number of students in classes I and IV in school ABC to number of students in classes II and VI in school XYZ?

- A) 23 : 56
- B) 45 : 59
- C) 43 : 55
- D) 25 : 41
- E) None of these

Option C

Explanation:

$24 + 62 : 36 + 74$

$86 : 110$

$43 : 55$

48. Students in school ABC are approximately what percent lesser than students in school XYZ?

- A) 15%
- B) 27%
- C) 33%
- D) 12%
- E) 22%

Option E

Explanation:

In ABC = 2280

In XYZ = 2920



$$\text{Required \%} = (2920 - 2280) / 2920 * 100$$

49. If from school ABC, 5% and 10% of students of classes IV and I respectively gets shifted to same respective classes in school XYZ, then find the average number of students in classes I and IV in school XYZ.

- A) 429
- B) 553
- C) 467
- D) 429
- E) 534

Option C

Explanation:

$$\text{From D} = 5/100 * 620 = 31$$

$$\text{From A} = 10/100 * 240 = 24$$

$$\text{So now in A and D in XYZ} = 320 + 24 + 560 + 31 = 935$$

$$\text{So average} = 935/2 = 467.5$$

50. Students in class V in school ABC is what percent of the number of students in classes II and III together in school XYZ?

- A) 64.78%
- B) 68.75%
- C) 75.75%
- D) 99.35%
- E) 102.55%

Option B

Explanation:

$$440 / (360 + 280) * 100$$

Quantitative Aptitude: Data Interpretation Set 6 (Missing DI)

Directions (51 – 55):

The table shows the number of males (M) and females (F) in Five Companies A, B, C, D and E during Six years.

Some values are missing in the table. To answer each question, refer to data in table and respective question.



Company/ Year	A		B		C		D		E	
	M	F	M	F	M	F	M	F	M	F
2011					202		102	142		12
2012			112		105				136	20
2013		182	126	164		150		140	38	
2014	122	106		118	104		100			85
2015			124			105		100	100	
2016	138		142	128	186		124			125

51. If the average number of female workers in all the given companies in 2013 is 156 and the difference between average number of female workers in all the given companies in 2013 and average number of male workers in all the given companies in 2016 is ten, then what is the difference between the male workers in Company D in 2016 and female workers in company E in 2013?

- A) 8
- B) 6
- C) 5
- D) 4
- E) 2

Option D

Solution:

Average number of female workers in all the given companies in 2013 = 156

Total female workers = $156 * 5 = 780$

So the female workers in Company E in 2013 = $780 - 644 = 136$

Average number of male workers in all the given companies in 2016 = $156 - 10 = 146$

So total male workers = $146 * 5 = 730$

The male workers in Company E in 2016 = $730 - 590 = 140$

Difference = $140 - 136 = 4$

52. If the total female workers in Company B is 830 and the average female workers in company C is 100 for the years 2012, 2013, 2014 and 2015, then the total number of female workers in Company B in 2012, 2013, 2014 and 2015 together is what percent more than the total number of female workers in Company C in the same years together?

- A) 40%
- B) 16%
- C) 25%
- D) 18%
- E) 20%



Option C

Solution:

Average female workers in company C (2012, 2013, 2014 and 2015) = 100

Total female workers in company C (2012, 2013, 2014 and 2015) = $100 \times 4 = 400$

Total female workers in Company B = 830

Total female workers in company B (2012, 2013, 2014 and 2015) = $830 - (202 + 128) = 500$

Required % = $(500 - 400) / 400 \times 100 = 25\%$

53. If the average of total number of workers (male and female) in companies A, B and C together in 2013 is 220 and in the year 2014, the sum of male workers of company B and female workers of company C is 100, then what is the ratio of the total number of workers (male and female) in companies A, B and C together in 2013 to the total number of workers (male and female) in the same companies together in 2014?

- A) 4:3
- B) 6:5
- C) 2:5
- D) 8:5
- E) 2:3

Option B

Solution:

Total number of workers (male and female) in companies A, B and C together in 2013 = 660

Total number of workers (male and female) in companies A, B and C together in 2014 = $100 + 122 + 106 + 104 + 118 = 550$

Ratio = $660 : 550 = 6:5$

54. Total number of workers (male and female) in company D in the year 2011 is 280 and then decreased by 20 for every year. Total number of workers (male and female) in company E in the year 2011 is 20 and then doubled for every year. The total number of female workers in company E during all the given years together is what percent (approximately) of the total number of male workers in company D during all the given years together?

- A) 40%
- B) 56%
- C) 65%
- D) 68%
- E) 70%

Option E

Solution:

For the year 2012, males = $260 - 136 = 124$

For the year 2013, males = $240 - 140 = 100$



For the year 2015, males = $200 - 100 = 100$

Total number of male workers = $142 + 124 + 120 + 100 + 100 + 124 = 710$

For the year 2011, females = $20 - 12 = 8$

For the year 2013, females = $80 - 38 = 42$

For the year 2015, females = $320 - 100 = 220$

Total number of female workers = $8 + 20 + 42 + 85 + 220 + 125 = 500$

Required % = $(500/710) \times 100 = 70.42\%$

55. Total number of workers (male and female) in company D in the year 2011 is 280 and then decreased by 20 for every year. Total number of workers (male and female) in company E in the year 2011 is 20 and then doubled for every year. The total number of female workers in company E during all the given years together is what percent (approximately) less than the total number of male workers in company D during all the given years together?

- A) 14%
- B) 16%
- C) 25%
- D) 29%
- E) 18%

Option D

Solution:

For the year 2012 = $260 - 136 = 124$

For the year 2013 = $220 - 120 = 100$

For the year 2015 = $200 - 100 = 100$

Total number of male workers = $142 + 124 + 120 + 100 + 100 + 124 = 710$

For the year 2011 = $20 - 12 = 8$

For the year 2013 = $80 - 38 = 42$

For the year 2015 = $320 - 100 = 220$

Total number of female workers = $8 + 20 + 42 + 85 + 220 + 145 = 500$

Required % = $(710 - 500/710) \times 100 = 29.57\%$

Directions (56 – 60):

The table shows the number of marks secured by each student in different subjects. The marks are out of total 150 marks in each subject.

Some values are missing in the table. To answer each question, refer to data in table and respective question.

Student/Subject	English	Maths	Physics	Chemistry	Biology	Statistics
	(150)	(150)	(150)	(150)	(150)	(150)
Ravi	___	140	___	120	___	140
Pavi	___	___	115	126	140	___



Suresh	80	___	64	100	___	120
Ramesh	___	150	120	___	___	130
Geeta	88	___	___	112	___	142
Sita	104	132	138	___	132	___

56. If the average marks of Pavi and Suresh is 105 and the marks scored by Pavi & Suresh in Maths is 60 less than that of marks scored by Ramesh & Suresh in Biology. Find the respective ratio of the total marks obtained by Pavi and Suresh in Maths and that scored by Suresh and Ramesh in Biology?

- A) 1 : 3
- B) 3 : 5
- C) 7 : 5
- D) 7 : 9
- E) None of these

Option D

Solution:

Average marks of Pavi and Suresh = 105

Marks of Pavi and Suresh = 210

Marks of Suresh and Ramesh = 270

Ratio = 210 : 270 = 7 : 9

57. Total marks obtained by six students in Maths is 700 and average marks of Pavi and Suresh in Maths is 105. If 40% of mark is required to pass each subject then what is the difference between the minimum pass marks and marks scored by Geeta?

- A) 3
- B) 5
- C) 8
- D) 7
- E) None of these

Solution:

Option C

Maths marks of Geeta = $700 - (140 + 150 + 132 + 210) = 68$

Minimum pass marks = $40/100 * 150 = 60$

Difference = 8

58. If the average marks of Ravi in English, Physics and Biology is 120 and the sum of the marks obtained by Ravi in Maths, Chemistry and Statistics is same as the marks obtained by Ramesh in English, Physics and Chemistry then the total marks scored by Ravi in all subjects together is what % of total marks obtained by Ramesh in all the subjects together?



- A) 65%
- B) 95%
- C) 85%
- D) 75%
- E) None of these

Option B

Solution:

Average marks of Ravi in English, Physics and Biology = 120

Total marks of Ravi in English, Physics and Biology = 360

Marks obtained by Ravi in Maths, Chemistry and Statistics = 400

Total marks scored by Ravi in all subjects together = $360 + 400 = 760$

Total marks scored by Ramesh in all subjects together = $400 + 400 = 800$

Required % = $760/800 * 100 = 95\%$

59. If Marks scored by Sita in Chemistry and Statistics is 30 less than the marks scored by herself in Maths then find the overall % of marks obtained by Sita in Maths, Chemistry and Statistics?

- A) 63%
- B) 55%
- C) 84%
- D) 62%
- E) 52%

Option E

Solution:

Marks obtained by Sita in Maths, Chemistry and Statistics = $102 + 132 = 234$

% of marks obtained by Sita in Maths, Chemistry and Statistics = $234/450 * 100 = 52\%$

60. Pavi's marks in Statistics equals to 50% of the marks scored by herself in Biology while Sita's Marks in Statistics is 10 less than the marks scored by herself in Physics. Then what is the average marks scored by students in Statistics?

- A) 112.3
- B) 121.7
- C) 184.5
- D) 162.4
- E) 152.4

Option B

Solution:

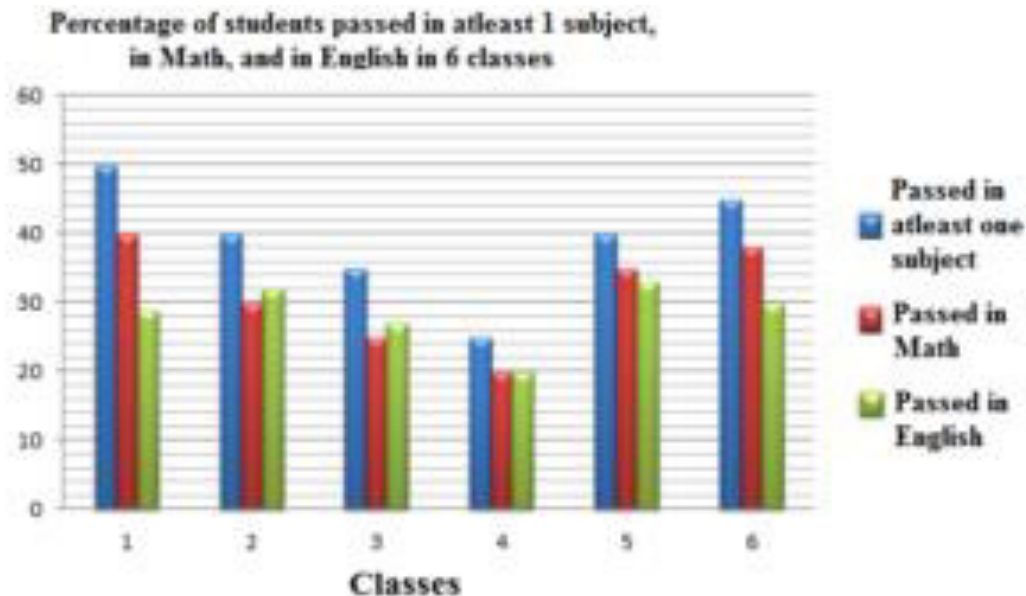
Pavi's marks in Statistics = 50% of 140 = 70

Sita's Marks in Statistics = $138 - 10 = 128$

Average = $(140 + 70 + 120 + 130 + 142 + 128)/6$

Directions (61 – 65):

Study the following bar graph and table to answer the following:



Class	1	2	3	4	5	6
No of Students	1200	1250	1400	1500	1100	1300

61. What is the number of students who passed in only Math in the 6 classes together?

- A) 811
- B) 623
- C) 598
- D) 824
- E) 792

Option A

Solution:

For class 1: Students passed in at least 1 subject = $50/100 \times 1200 = 600$

Students passed in Math = $40/100 \times 1200 = 480$

Students passed in English = $29/100 \times 1200 = 348$



Classes	Number of Students passed			
	in at least one subject	In Math	In English	In math but not English
1	600	480	348	252
2	500	375	400	100
3	490	350	378	112
4	375	300	300	75
5	440	385	363	77
6	585	494	390	195

Similarly for all other classes:

So the required sum = $252+100+112+75+77+195 = 811$

62. Which class ranks third among the number of students who passed in English when arranged in ascending order?

- A) 40%
- B) 16%
- C) 25%
- D) 18%
- E) 20%

Option C

Solution:

See the table in solution of 1st question: Required class is 5th.

63. How many students in class 4 have not passed in Math?

- A) 4:3
- B) 6:5
- C) 2:5
- D) 8:5
- E) 2:3

Option B

Solution:

Passed = 20%

So not passed = $80/100 * 1500$

64. What is the ratio of number of students who have passed in only Math in class 2 to the number of students who have passed in Math in class 3.

- A) 40%
- B) 56%
- C) 2 : 7

- D) 68%
E) 70%

Option E

Solution:

From the table in question 1 above:

Number of students passed in only math in class 2 = $500 - 400 = 100$

Number of students passed in math in class 3 = 350

SO ratio 100 : 350

65. Which of the following is true about the number of students, n who have passed in only English in class 5?
- A) $0 < n < 10$ B) $10 < n < 14$ C) $14 < n < 21$ D) $21 < n < 37$ E) $37 < n < 56$

Option E

Solution:

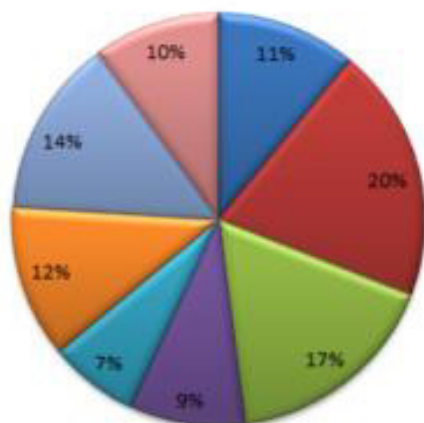
Number of students who have passed in only English in class 5, $n = 440 - 385 = 55$

Directions (66 – 70):

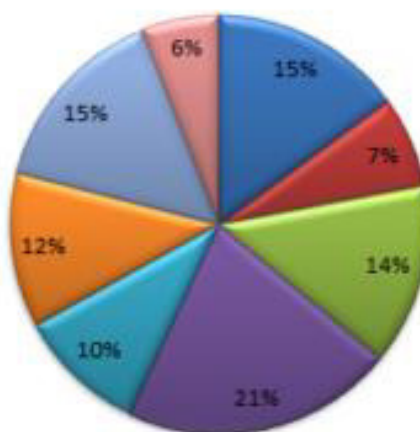
The following pie charts show the percentage of people applied for jobs from different countries and people who got the job from each country respectively.

Success rate is defined as the number of people who got the job as a percentage of the number of job seekers.

Total number of job seekers = 2,356,200



People who got the job = 71400



66. Find the success rate of country A to C.
A) 125 : 184



- B) 165 : 254
- C) 276 : 123
- D) 255 : 154
- E) None of these

Option D

Solution:

Since the total number is same, there is no need to find the exact number of people who got job.

So required ratio:

A : C

$$15/11 : 14/17 = 255 : 154$$

67. Find the difference between the number of people who got job from countries F and H.

- A) 4376
- B) 4284
- C) 4128
- D) 4173
- E) None of these

Option B

Solution:

$$\text{Difference} = (12-6)\% \text{ of } 71400 = 4284$$

68. What is the approximate percentage point difference between the success rate of countries D and G?

- A) 6%
- B) 4%
- C) 8%
- D) 5%
- E) None of these

Option B

Solution:

For country D:

$$\text{Total job seekers} = 9/100 * 2356200 = 212058$$

$$\text{and who got job} = 21/100 * 71400 = 14994$$

$$\text{so success rate} = 14994/212058 * 100 = 7\%$$

For county G:

$$\text{Total job seekers} = 14/100 * 2356200 = 329868$$

and who got job = $15/100 * 71400 = 10710$
so success rate = 3%
So different in % points = $7 - 3 = 4$

69. What is the success rate of country B?

- A) 0.63% B) 3.55% C) 1.06% D) 2.62% E) 1.52%

Option C

Solution:

Total job seekers = $20/100 * 2356200 = 471240$
and who got job = $7/100 * 71400 = 4998$
so success rate = $4998/471240 * 100 = 1.06\%$

70. Find the success rate of female job seekers if the success rate of male job seekers is 3.14%

- A) 11.23% B) 12.17% C) 18.45% D) 16.24% E) Cannot be determined

Option E

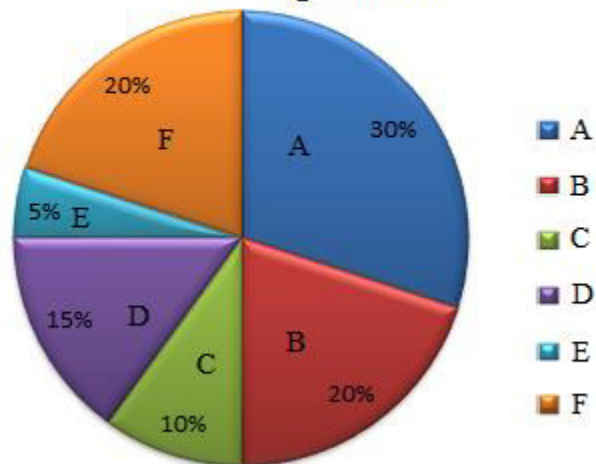
Solution:

Number of females and males is not given so cant be determined.

Directions (71 – 75):

Study the following pie chart and table to answer the following questions:

% of people in different departments
of an organization



	Below 40 years (Male : Female)	Above 40 years (Male : Female)
A	9 : 11	4 : 5
B	9 : 1	3 : 7
C	7 : 8	8 : 7
D	7 : 8	7 : 9
E	4 : 1	5 : 7
F	7 : 3	1 : 9



71. If the total number of people in department B below the age 40 and years and above 40 years is 1320, find the total number of people in the company altogether?

- A) 6600
- B) 6700
- C) 5400
- D) 6200
- E) 5800

Option A

Solution:

$20/100 * \text{total people in company} = 1320$

So total people in company = 6600

72. If the total number of people in department C is 160, then what is the number of female employees above 40 years in department D?

- A) 144
- B) 146
- C) 125
- D) 135
- E) 122

Option D

Solution:

$10/100 * \text{total people in company} = 160$

So total people in company = 1600

So female employees above 40 years in department D = $9/16 * 15/100 * 1600 = 135$

73. If the total number of employee in department D is 375 and total number of males above 40 years of age and females below 40 years of age is 122 in department F, then what is the number of males below 40 years in department F?

- A) 258
- B) 266
- C) 243
- D) 252
- E) 247

Option D

Solution:

$15/100 * \text{total people in company} = 375$

So total people in company = 2500



And total people in department F is $20/100 * 2500 = 500$

Let total number of employees in dept D below 40 years is x and above 40 years is y. Then

$$1/10 * y + 3/10 * x = 122 \text{ or}$$

$$3x + y = 1220$$

Also from above total people in department F is 500 so

$$x + y = 500$$

Solve the two equations, $x = 360$

$$\text{So number of males below 40 years in department F} = 7/10 * 360 = 252$$

74. If the number of female employees below 40 years and number of male employees above 40 years in department E are 40 and 75 respectively, then find the number of employees in company A.

- A) 2160
- B) 2090
- C) 2450
- D) 2370
- E) 2280

Option E

Solution:

$$1/5 * \text{employees below 40 years in E} = 40$$

$$\text{So employees below 40 years in E} = 200$$

AND

$$5/12 * \text{employees below 40 years in E} = 75$$

$$\text{So employees above 40 years in E} = 180$$

$$\text{So total employees in E} = 200 + 180 = 380$$

$$\text{So } 5/100 * \text{total employees in company} = 380$$

$$\text{So total employees in company} = 7600$$

$$\text{So total employees in dept A} = 30/100 * 7600 = 2280$$

75. If the total number of employee in department A is 255 and total number of males below 40 years of age and females above 40 years of age is 131 in department B, then find the ratio of total number of employees in dept B below 40 years and total number of employees in dept B above 40 years?

- A) 6 : 11
- B) 3 : 8
- C) 5 : 12
- D) 10 : 17
- E) 7 : 11



Option A

Solution:

$30/100 \times \text{total people in company} = 255$

So total people in company = 850

And total people in department B is $20/100 \times 850 = 170$

Let total number of employees in dept B below 40 years is x and above 40 years is y. Then

$$9/10 \times x + 7/10 \times y = 131 \text{ or}$$

$$9x + 7y = 1310$$

Also

$$x + y = 170$$

Solve the two equations, $x = 60$, $y = 110$

So ratio = $60 : 110 = 6 : 11$

Directions (76 – 80): (asked exact same type in SBI PO Main 2016 exam)

The following table shows the MP, SP, Profit, Profit% and Discount% on 5 different products sold. Some values are missing in the table. Fill in the values and use it to answer the following questions:

Products	MP	CP	Profit	Profit%	Discount%
A		250		20	25
B	1100		22	10	
C	300	180	27		16
D		320	16		73
E	1100		27	10	
F	600	360			31

76. What is the difference in the MPs of products E and C?

- A) Rs 780
- B) Rs 830
- C) Rs 800
- D) Rs 700
- E) Rs 920

Option C

Solution:

MP of C = 300

For MP of E:

$$10/100 \times \text{CP} = 27$$



So CP = 270, then SP = 270 + 27 = Rs 297

So MP = $100/(100-73) * 297$ = Rs 1100

So difference = 1100 - 300 = Rs 800

Similarly find all values for questions

Products	MP	CP	Profit	Profit%	Discount%
A	400	250	50	20	25
B	1100	220	22	10	78
C	300	180	27	15	31
D	400	320	16	5	16
E	1100	270	27	10	73

77. Find the difference in percentage points of discounts given for products E and discounts given for products B and C together.

- A) 49%
- B) 36%
- C) 33%
- D) 45%
- E) 76%

Option B

Solution:

Discount% for E = 73%

Discount% for B:

$10/100 * CP = 22$

So CP = 220, then SP = 220 + 22 = 242

MP = 1100, so discount % = $(1100-242)/1100 * 100 = 78\%$

Similarly discount % for C = 31%

So required percentage points = $(31+78) - 73 = 36\%$

78. What is the total of MP of product D and SP of product B?

- A) Rs 642
- B) Rs 532
- C) Rs 628
- D) Rs 568
- E) Rs 544

Option A

Solution:



For country D:

$$400 + 242 = \text{Rs } 642$$

79. If a person buys products A and E for their respective selling prices, then what is the resultant discount% given to him?

- A) 50.70%
- B) 60.20%
- C) 48.06%
- D) 67.62%
- E) 54.50%

Option B

Solution:

$$\text{Total MP of A and E} = 400 + 1100 = \text{Rs } 1500$$

$$\text{Total SP of A and E} = 300 + 297 = \text{Rs } 597$$

$$\text{So discount\%} = (1500 - 597) / 1500 * 100 = 60.2\%$$

80. Find the profit% given for product F.

- A) 16%
- B) 12%
- C) 18%
- D) 15%
- E) Cannot be determined

Option D

Solution:

Use formula

$$\text{MP} = (100 + p\%) / (100 - d\%) * \text{CP}$$

So

$$600 / 360 = (100 + p\%) / (100 - 31)$$

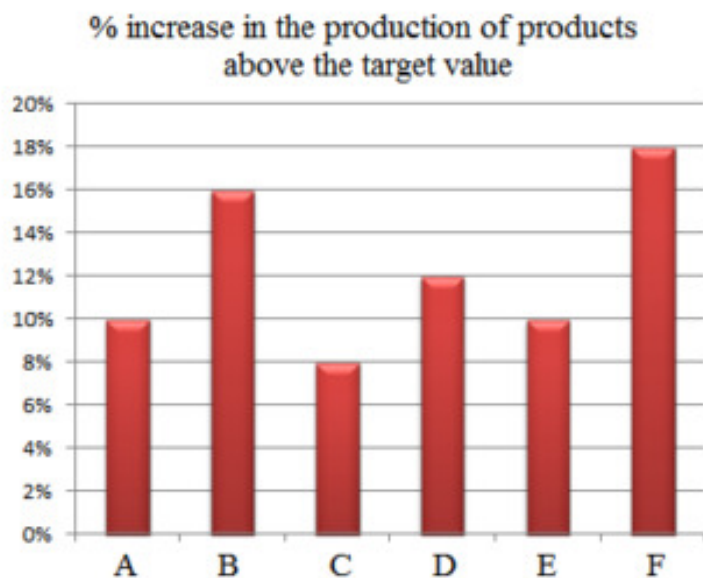
$$\text{Solve, } p\% = 15\%$$

Directions (81 – 85):

A company makes a target of producing 1250 each of its 6 products A, B, C, D, E, and F in a month for selling to its distributors. But after a month it was found that company could manufacture each product more than the target value

The bar graph shows the % increase in the productions of each of the products. The table shows the ratio of defective to non-defective products sold.

Study the bar graph and table to answer the questions that follow.



Products	Defective : Non Defective
A	2 : 9
B	1 : 4
C	2 : 7
D	1 : 6
E	3 : 8
F	1 : 4

81. Find the total products D and E which are defective.

- A) 665
- B) 676
- C) 542
- D) 575
- E) 584

Option D

Solution:

First find each of the total products

A's production is 10% above the target value of 1250.

So

$$A - 110/100 * 1250 = 1375$$

$$B - 116/100 * 1250 = 1450$$

$$C - 108/100 * 1250 = 1350$$

$$D - 112/100 * 1250 = 1400$$

$$E - 110/100 * 1250 = 1375$$

$$F - 118/100 * 1250 = 1475$$

$$\text{Defective D products} = 1/7 * 1400 = 200$$

$$\text{Defective E products} = 3/11 * 1375 = 375$$

$$\text{So total} = 200 + 375 = 575$$

82. Find the difference in production of products B and E together (non-defective) and production of products A and F together (defective).

- A) 1615
- B) 1461
- C) 1254



- D) 1358
E) 1225

Option A

Solution:

Non-Defective B products = $\frac{4}{5} * 1450 = 1160$

Non-Defective E products = $\frac{8}{11} * 1375 = 1000$

Defective A products = $\frac{2}{11} * 1375 = 250$

Defective F products = $\frac{1}{5} * 1475 = 295$

So required ans = $(1160+1000) - (250+295) = 1615$

83. Products A and B are sold for Rs 100 and Rs 120 respectively. The defective A and B products are returned to the company, how much worth of product are returned to the company?

- A) Rs 62200
B) Rs 72700
C) Rs 59800
D) Rs 63100
E) Rs 34800

Option C

Solution:

Defective A products = 250

Defective B products = $\frac{1}{5} * 1450 = 290$

So loss = $250*100 + 290*120 = \text{Rs } (25000 + 34800) = \text{Rs } 59800$

84. Production of products C and E costs Rs 50 and Rs 60 respectively. They are sold for Rs 60 and Rs 80 respectively. If the defective products are returned to the company, find the loss% incurred by the company because of these products (considering that defective products are a waste for the company).

- A) 4.57%
B) 4.67%
C) 5.93%
D) 3.35%
E) 5.28%

Option B

Solution:

CP of C products = $1350 * 50 = \text{Rs } 67500$

CP of E products = $1375 * 60 = \text{Rs } 82500$

So total CP of C and E = $67500 + 82500 = \text{Rs } 1,50,000$

Non-Defective C products = $\frac{7}{9} * 1350 = 1050$

So amount got by selling these Non-Defective C products = $1050*60 = \text{Rs } 63000$

Non-Defective E products = $\frac{8}{11} * 1375 = 1000$



So amount got by selling these Non-Defective E products = $1000 \times 80 = \text{Rs } 80000$
So total SP of Non-Defective C and E products = $63000 + 80000 = \text{Rs } 1,43000$
Defective C and E products are returned, so that is a loss.
So Loss % = $(150000 - 143000)/150000 \times 100 = 4.67\%$

85. All defective products are returned to the company and also the company will have to give a penalty of Rs 5 on defective A, B and D products and Rs 6 on defective C, E and F products. Find the total penalty to be given by the company?

- A) Rs 9460
- B) Rs 9280
- C) Rs 9840
- D) Rs 9520
- E) Rs 9420

Option D

Solution:

Defective A products = 250

Defective B products = 290

Defective C products = 300

Defective D products = 200

Defective E products = 375

Defective F products = 295

So penalty = $(250+290+200) \times 5 + (300+375+295) \times 6 = 3700 + 5820 = \text{Rs } 9520$

Directions (86 – 90):

Company ABC has 3480 employees in eight departments. The difference between the number of employees in the departments F and E is 472. The ratio of employees in departments F to C is 7:6. Ratio of employees in departments G to D is 4:3, while department H has 88 more employees than department A. Department B has 328 employees. Department D has 40 more employees than department E and Department A has 208 employees more than department G.

86. What is the difference between the number of employees in departments A and F?

- A) 134
- B) 187
- C) 165
- D) 144
- E) 128

Option D

Solution:

Let the number of employees in department F and C be $7x$ and $6x$ respectively

Let the number of employees in department E be y .

Then, number of employees in department D = $y + 40$



$$\text{Department G} = \frac{4}{3}(y + 40)$$

$$\text{Department A} = \frac{4}{3}(y + 40) + 208$$

$$\text{Department H} = \frac{4}{3}(y + 40) + 296$$

$$\text{Department B} = 328$$

$$\text{So, } 7x + 6x + y + y + 40 + 4(y + 40) + 208 + 296 + 328 = 3480$$

$$13x + 6y = 2448$$

$$7x - y = 472$$

Solve the equations we get $x = 96$ and $y = 200$

So number of employees in departments

A - 528, B - 328, C - 576, D - 240, E - 200, F - 672, G - 320, H - 616

So difference in A and F = $672 - 528 = 144$

87. What is the difference between the number of employees in departments A and B together and the number of employees in departments C and E together?

- A) 89
- B) 96
- C) 73
- D) 75
- E) 80

Option E

Solution:

A - 528, B - 328, C - 576, D - 240, E - 200, F - 672, G - 320, H - 616

$$(A + B) - (C + E) = (528 + 328) - (576 + 200) = 80$$

88. In there are 290 and 278 females in departments C and H respectively, then find the ratio of the number of male employees in these two departments respectively.

- A) 8 : 13
- B) 12 : 17
- C) 11 : 13
- D) 9 : 13
- E) 11 : 15

Option C

Solution:

A - 528, B - 328, C - 576, D - 240, E - 200, F - 672, G - 320, H - 616

Employees in C = 576, females = 290, so males = 286

Employees in H = 616, females = 278, so males = 338

$$\text{So ratio} = 286 : 338 = 11 : 13$$

89. If 5% and 15% of employees in departments D and G are on a tour to a different city, how many employees from these two departments have come to office (it is mandatory to be on work on

that particular day)?

- A) 500 B) 534 C) 564 D) 487 E) 465

Option A

Solution:

A – 528, B – 328, C – 576, D – 240, E – 200, F – 672, G – 320, H – 616

Employees in D = 240. 95% have come, so $95/100 \times 240 = 228$

Employees in G = 320. 85% have come, so $85/100 \times 320 = 272$

So those have come to office from these 2 departments = $228 + 272 = 500$

90. Ratio of males to females in departments C and F is 7 : 5 and 4 : 3 respectively. Find the percent of females in these two departments.

- A) 66% B) 42% C) 48% D) 55% E) Cannot be determined

Option B

Solution:

A – 528, B – 328, C – 576, D – 240, E – 200, F – 672, G – 320, H – 616

Females in C = $5/12 \times 576 = 240$

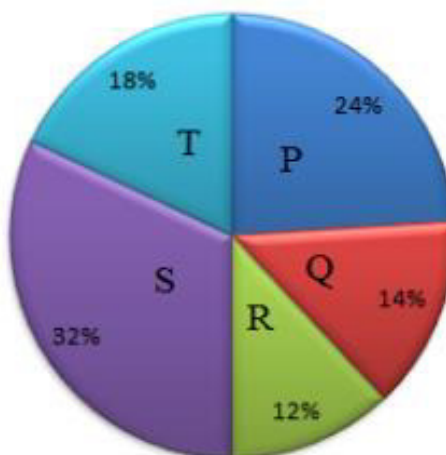
Females in F = $3/7 \times 672 = 288$

So % of females = $(240+288)/(576+672) \times 100 = 42\%$

Directions (91 – 95):

The first pie chart shows the distribution of students who participated from different states A, B, C, D and E in five sports P, Q, R, S and T. The second pie chart shows the distribution of students who participated in different sports P, Q, R, S and T from given states.

Total students who participated = 4800





91. If 25% of students from state A participate in sport R, then what percent of students who participate in sport R are from state A?

- A) 46%
- B) 67%
- C) 54%
- D) 37%
- E) 58%

Option A

Solution:

Number of students from state A who participated in R = 25% of 22% of 4800 = 264

Total Number of students who participated in R = 12% of 4800 = 576

So required % = $264/576 * 100 = 46\%$

92. If from states A and D, no one took part in sport Q, then find the number of students from state B who took part in sport Q given they are 78 less than the average number of students participated from all states in sport Q.

- A) 161
- B) 155
- C) 125
- D) 146
- E) 182

Option D

Solution:

Number of students participated in sport Q = 14% of 4800 = 672

Now no one from A and D participated in Q, so average of students from each state = $672/3 = 224$ (i.e. from states B, C and E)

So number of students who participated from state B = $224 - 78 = 146$

93. If in sport S, 25% of students from state B participated, 25% students more than from state B participated from state C and ratio of students who participated from states A, D and E is 4 : 6 : 5, then find the number of students from state D who participated in sport S.

- A) 620
- B) 720
- C) 590
- D) 630
- E) 420



Option E

Solution:

Who participated in sport S = 32% of 4800 = 1536

Students from state B who participated in S = 25% of 18% of 4800 = 216

Students from state C who participated in S = 125% of 216 = 270

So who participated from states A, D and E = $1536 - (216 + 270) = 1050$

From A : D : E is 4 : 6 : 5

So $4x + 6x + 5x = 1050$

Solve, $x = 70$

So from D = $6x = 6 \times 70 = 420$

94. If a total of 552 students from states A, B, C and E participated in sport T, then find how much percent of students from state D participated in sport T.

- A) 25%
- B) 17%
- C) 33%
- D) 35%
- E) 28%

Option A

Solution:

Number of students who participated in sport T = 18% of 4800 = 864

So number of students from state D who participated in sport T = $864 - 552 = 312$

Number of students who participated from state B = 26% of 4800 = 1248

So required% = $312 / 1248 \times 100 = 25\%$

95. If 70% of students from state E and 75% of students from state C do not won any prizes, then find the % of students from these two stets who won the prizes?

- A) 25%
- B) 32%
- C) 24%
- D) 28%
- E) 23%

Option D

Solution:

Who won prizes from state E = 30% of 20% of 4800 = 288

Who won prizes from state C = 25% of 14% of 4800 = 168

So total from these two states who prizes = $288 + 168 = 456$



Total students who participated from these 2 states = $(20+14)\%$ of 4800 = 1632
So required % = $456/1632 * 100 = 28\%$

Directions (96 – 100): Study the following and answer the questions that follow:

There are some people who want to eat three different fruits – orange, grapes and strawberry. Number of people who want to eat oranges is 4500, of which $26\frac{2}{3}\%$ people want to eat both oranges and grapes only. The number of people who want to eat both grapes and strawberry only are $33\frac{1}{3}\%$ greater than those who want to eat all the three fruits. The number of people who want to eat strawberry but not grapes is 3700. The number of people who want to eat only grapes is 1900 less than those who want to eat strawberry but not grapes. The number of people who want to eat grapes but not oranges is 3000. The number of people who want to eat both oranges and strawberry only is 1500.

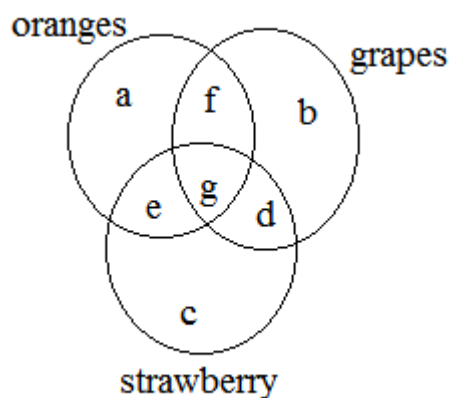
96. What is the total number of people who want to eat grapes?

- A) 5100
- B) 5800
- C) 5600
- D) 5400
- E) 5200

Option A

Solution:

$$b + d + f + g = 1800 + 1200 + 900 + 1200 = 5100$$



The question will be solved using venn diagram as:

Given:

Number of people who want to eat oranges is 4500 so

$$a + e + g + f = 4500$$

of which $26\frac{2}{3}\%$ people want to eat only oranges and grapes so

$$f = 26\frac{2}{3}\% \text{ of } 4500 = 1200$$



The number of people who want to eat grapes and strawberry both are $33\frac{1}{3}\%$ greater than those who want to eat all the three fruits. So

d is $33\frac{1}{3}\%$ greater than g

The number of people who want to eat strawberry but not grapes is 3700. So

$c + e = 3700$ (means strawberry and oranges)

The number of people who want to eat only grapes is 1900 less than those who want to eat strawberry but not grapes. So

$$b = (c+e) - 1900 = 3700 - 1900 = 1800$$

The number of people who want to eat grapes but not oranges is 3000. So

$$b + d = 3000$$

From above, $b = 1800$. So

$$d = 3000 - 1800 = 1200$$

From above d is $33\frac{1}{3}\%$ greater than g . So

$$1200 = (100 + 33\frac{1}{3})\% \text{ of } g$$

Solve, $g = 900$

Now we have,

The number of people who want to eat oranges and strawberry both is 1500. So

$$e = 1500$$

Now from above, we have

$$a + e + g + f = 4500$$

$$c + e = 3700$$

$$b = 1800$$

$$d = 1200$$

$$f = 1200$$

$$g = 900$$

$$\text{So from } a + e + g + f = 4500, \text{ we get: } a + e = 4500 - (900 + 1200) = 2400$$

$$\text{Now } a + e = 2400, c + e = 3700, \text{ and } e = 1500$$

$$\text{So } a = 900, \text{ and } c = 2200$$

97. What is the number of people who want to eat both oranges and grapes only?

- A) 1600
- B) 1900
- C) 1200
- D) 1500
- E) 1100

Option C

Solution:

$$f = 1200$$



98. What is the number of people who want to eat only one of the fruits?

- A) 4200
- B) 5500
- C) 5900
- D) 4800
- E) 4900

Option E

Solution:

$$a + b + c = 900 + 1800 + 2200 = 4900$$

99. What is the ratio between people who want to eat only strawberry and who want to eat both grapes and strawberry?

- A) 4 : 9
- B) 11 : 6
- C) 12 : 7
- D) 15 : 11
- E) 10 : 7

Option B

Solution:

$$c : d = 2200 : 1200 = 11 : 6$$

100. What is the number of people who want to eat more than one fruit?

- A) 3600
- B) 4000
- C) 3200
- D) 4800
- E) 4500

Option D

Solution:

$$d + e + f + g = 1200 + 1500 + 1200 + 900 = 4800$$

Directions (101 – 105):

The table shows the sales of products A, B, C, D and E in five months. Also the average sales of all products in respective months and average sales in respective months is given. Some



values are missing in the table. Find the values on the basis of given information and answer accordingly.

Products	January	February	March	April	May	Average
A	2050	2200		2300		2300
B		2350	2250	2500		2404
C	2250		1950		2230	2200
D	2100	2540		2450	2070	2242
E		2650	2300		2400	2310
Average	2150	2392	2190	2350	2374	

101. What is the average number of C products sold in February, A products sold in April and E products sold in January?

- A) 2800
- B) 2190
- C) 2280
- D) 2130
- E) 1090

Option B

Solution:

In Feb column only 1 value is missing. So it can be found as

$2392 \times 5 - (2200 + 2350 + 2540 + 2650) = 2220 = \text{Sales of C in February}$

Now after filling this value in table, in C product row, only 1 value is missing. It can be found as

$2200 \times 6 - (2250 + 2220 + 1950 + 2230) = 2350 = \text{Sales of C in April}$

Now fill this in table. in April column only 1 value is missing.

So like this all the missing values can be found.

Final table is

Products	January	February	March	April	May	Average
A	2050	2200	2400	2300	2550	2300
B	2300	2350	2250	2500	2620	2404
C	2250	2220	1950	2350	2230	2200
D	2100	2540	2050	2450	2070	2242
E	2050	2650	2300	2150	2400	2310
Average	2150	2392	2190	2350	2374	

$$(2220 + 2300 + 2050)/3 = 2190$$

102. Sales of B in January and April is how much percent greater than sales of D in March and April?



- A) 8.61%
- B) 6.55%
- C) 6.25%
- D) 7.86%
- E) 7.22%

Option D

Solution:

$$[(2300+2500) - (2300+2150)]/[(2300+2150)] * 100 = 7.86\%$$

103. If sales of A in June is equal to the average of sales of B in May and E in May, then find the average of sales of A products from January to June?

- A) 2675
- B) 2725
- C) 2335
- D) 2635
- E) 2455

Option C

Solution:

$$\text{average of sales of B in May and E in May} = (2620+2400)/2 = 2510$$

$$\text{So sales of A in June} = 2510$$

$$\text{So average sales of A from Jan to June} = (2050+2200+2400+2300+2550+2510)/6 = 2335$$

104. In which month, there is the highest sales of product B?

- A) May
- B) April
- C) January
- D) March
- E) February

Option A

Solution:

From table, sales of B in May is highest – 2620

105. Sales of product D in March is approximately what % of sales of product A in February and May together?

- A) 35%
- B) 32%
- C) 54%



- D) 48%
E) 43%

Option E

Solution:

$$2050/(2200+2550) * 100 = 43.16\%$$

Directions (106 – 110): Study the following table carefully and answer the questions that follow:

The table shows the total employees in different departments and percentage of males out of those in different years. Some values are missing in the table. Find the values on the basis of information given in questions and answer accordingly.

	Engineering		Arts		Business		Law		Medicine	
Years	Total	Emp % of men	Total	Emp % of men	Total	Emp % of men	Total	Emp % of men	Total	Emp % of men
2009	300	45		60	150	36	200	30	300	38
2010	250	30	280	75		40	260	60	280	40
2011	320	40	220	50	210	40	240	45		45
2012		45	250	60		50	250	50	300	40
2013	320	35	260	65		45	220	35	340	45
2014	350	50	300	60	260	45	240	40	330	

106. Number of employees in Business department in 2012 is 230. What is the respective ratio of the number of men to the total employees in Business department over all the years if the number of Woman employees in 2010 is 120 and in 2013 is 132 in the same department?
- A) 93 : 215
B) 45 : 124
C) 76 : 257
D) 34 : 234
E) 104 : 211

Option A

Solution:

Women in 2010 is 120, so 60% of total employees in 2010 is 120. So total employees in 2010 is 200

Similarly, total employees in 2013 is 240

Total employees in business = $150 + 200 + 210 + 230 + 240 + 260 = 1290$

Men in 2009 = $36/100 * 150 = 54$. Similarly find number of men in each year and add. This comes out to be 558

So ratio is 558 : 1290



107. What is the approximate average number of men in all the departments together in the year 2009 if total employees in 2009 in Arts department is 20% less than total employees in 2014 in the same department?

- A) 94
- B) 176
- C) 101
- D) 127
- E) 118

Option C

Solution:

Number of employees in 2009 in Arts = $80/100 * 300 = 240$

So in 2009:

No of men in engineering = $45/100 * 300 = 135$. Similarly find for all departments in the yr 2009. Add them and divide by 5

$$507/5 = 101$$

108. What is the difference between the total employees in all departments together in the year 2010 and the total employees in all departments together in the year 2011 if the number of Woman employees in 2010 in Business Department is 120 and that in 2011 in Medicine Department is 176?

- A) 65
- B) 60
- C) 56
- D) 40
- E) 34

Option D

Solution:

Women in Business in 2010 is 120, so 60% of total employees in Busi 2010 is 120. So total employees in 2010 is 200

Women in Medicine in 2011 is 176, so 55% of total employees in Med 2011 is 176. So total employees in 2011 is 320

Now add the employees in 2010 and 2011 respectively.

$$\text{So required difference} = 1310 - 1270 = 40$$

109. If percentage of men in Medicine department in 2014 is same as the percent of total employees in Engineering Department in 2011 as compared to total employees in Engineering Department in 2014, total employees in Arts Department in 2012 and total employees in Law Department in 2009 together, then what is the respective ratio of women employees in Medicine department in the year 2013 to the year 2014?



- A) 15 : 21
- B) 17 : 18
- C) 17 : 13
- D) 9 : 13
- E) 25 : 16

Option B

Solution:

Total employees in Engineering Department in 2011 = 320

Total employees in Engineering Department in 2014 = 350,

Total employees in Arts Department in 2012 = 250

Employees in Law Department in 2009 = 200

So % of men in Med in 2014 = $(320)/(350+250+200) * 100 = 40\%$

Women employees in Medicine department in the year 2014 = $60/100 * 330$

Women employees in Medicine department in the year 2013 = $55/100 * 340$

Take their ratio: 2013 : 2014

187 : 198 = 17 : 18

110. Total number of employees in Engineering and Business departments together in 2012 is 570 and difference between them is 110. If the number of employees in Engineering department is greater than those in Business department in the same year, then what is the total number of women employees in all the departments together in the year 2012?

- A) 707
- B) 635
- C) 743
- D) 838
- E) 755

Option A

Solution:

Let Number of employees in engg dept in 2012 = E, Number of employees in Busi dept in 2012 = B,

$E + B = 570$

$E > B$, So $E - B = 110$

Solve, $E = 340$ and $B = 230$

Number of women employees in Engineering = $55/100 * 340$. Similarly find for all departments in the year 2012 and add



Direction (111-115): Refer to the table and answer the following questions.

The table shows the performance of 6 batsmen.

Name of Batsman	Number of matches played by batsman in the tournament	Average run scored by batsman in the tournament	Total balls faced in the tournament	Strike Rate
Virat	20	—	—	160
Rohit	16	55	—	—
Rahane	—	60	400	120
Dhoni	—	—	—	80
Shikhar	10	70	800	—
Pujara	—	—	—	70

(i) Strike Rate= (Total Runs Scored/Total balls faced)*100

(ii) All the batsman could bat in all the matches played

(iii) You have to calculate the missing value and give the answer accordingly.

111. If the respective ratio between the balls faced by Dhoni and Pujara is 4:5, then by what percent did Pujara score more than Dhoni?

- A) 5.27%
- B) 9.67%
- C) 8.57%
- D) 9.37%
- E) Cannot be determined

Option D

Explanation:

Strike rate = (Run/Ball)*100=> Run= (S.R * Ball)/100

Let ball Dhoni:Pujara =4x:5x

Run by Dhoni(D)=80*4x/100=32x/10

Run by Pujara=70*5x/100=35x/10

Required %=(35x-32x)/32x *100=9.375%

112. If the runs scored by Shikhar in the last 3 matches of the tournament are not considered, his average decreases by 15. If the runs scored by Shikhar in 8th and 9th match are below 100 and



no two scores among these 3 scores are equal, what is the minimum possible run scored by Shikhar in the 10th match?

- A) 115
- B) 116
- C) 117
- D) 118
- E) Cannot be determined

Option D

Explanation:

Total runs scored by Shikhar in 10 matches = $10 \times 70 = 700$

Runs scored in 1st seven matches = $7 \times (70 - 15) = 385$ (as avg reduces by 15)

Runs scored in last 3 matches = $700 - 385 = 315$ (8th, 9th and 10th match)

Minimum run in 10th match means maximum runs in 8th and 9th match.

But run in 8th and 9th matches are below 100, \Rightarrow one is 99 other is 98 (as no run is equal)

Hence run in 10th match = $315 - (99 + 98) = 118$

113. Total balls faced by Virat is 600 less than the total runs made by him. What is the average of Virat in the tournament?

- A) 70
- B) 75
- C) 80
- D) 85
- E) Cannot be determined

Option C

Explanation:

Let average = $x \Rightarrow$ Total run = $20x$

Balls = $20x - 600$

$\Rightarrow (20x / (20x - 600)) \times 100 = 160$ [Strike Rate]

Solve $x = 80$

114. Rohit faces equal number of balls in first 8 matches he played in the tournament and the last 8 matches he played in the tournament. If his strike rate in first 8 and last 8 matches of the tournament are 80 and 96 respectively, What is the total number of balls faced by him in the tournament?

- A) 500
- B) 400
- C) 1000
- D) 800



E) 1200

Option C

Explanation:

Let he played x balls in 1st 8 matches and x balls in last 8 matches.

$$\text{S.R} = \text{Run/Ball} * 100 \Rightarrow \text{Run} = (\text{S.R} * \text{Ball} * 100)$$

$$\text{For 1}^{\text{st}} 8 \text{ matches} \Rightarrow \text{Run} = 80x/100$$

$$\text{For last 8 matches} \Rightarrow \text{Run} = 96x/100$$

$$\text{Total run} = 16 * 55 = 880$$

$$\Rightarrow 80x/100 + 96x/100 = 880$$

$$x = 500$$

$$\text{Total balls} = 2x = 1000$$

115. What is the number of match played by Rahane in the tournament?

A) 10

B) 12

C) 8

D) 6

E) 9

Option C

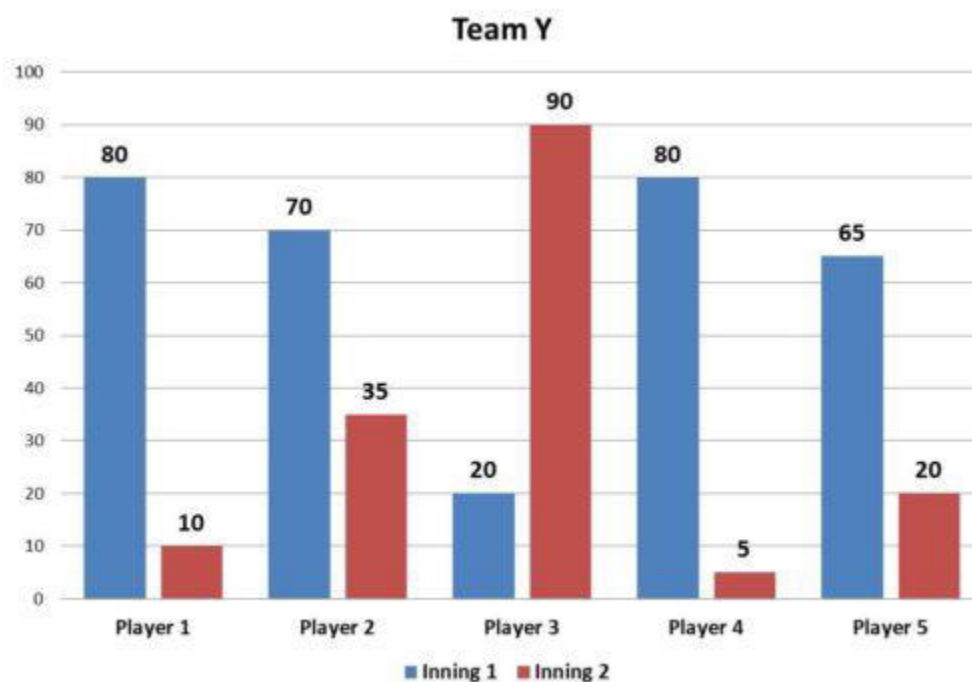
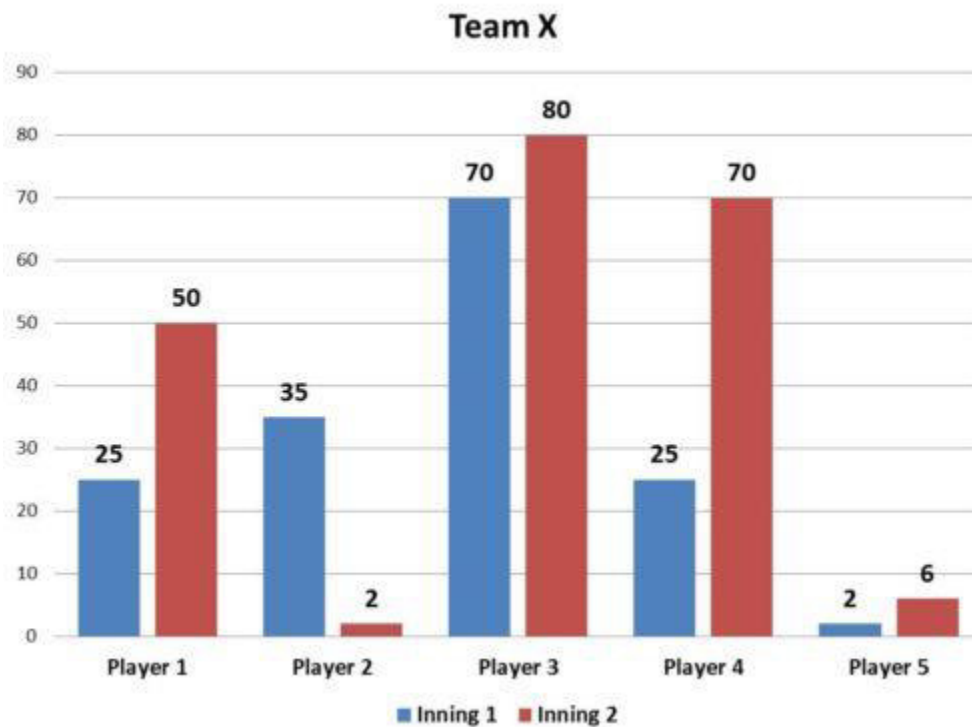
Explanation:

$$60x/400 * 100 = 120$$

$$x = 8$$

Direction (6-10): A test cricket match is played between Team X and Team Y. Both teams have only 5 players. The following bar graph shows the runs scored by different players of both the

teams in the two innings of the test match.



116. What is the margin in team Y's win?

- A) 105
- B) 107
- C) 110



- D) 112
E) 114

Option C
Explanation:

	Inning 1	Inning 2	Total
Player 1	25	50	75
Player 2	35	2	37
Player 3	70	80	150
Player 4	25	70	95
Player 5	2	6	8
Total	157	208	365
	Inning 1	Inning 2	Total
Player 1	80	10	90
Player 2	70	35	105
Player 3	20	90	110
Player 4	80	5	85
Player 5	65	20	85
Total	315	160	475

$$Y-X=110$$

117. If the man of the match is given on the basis of highest average run in a match, then who gets the man of the match?
- A) Player 3 of Team Y
B) Player 2 of Team Y
C) Player 2 of Team X
D) Player 3 of Team X
E) None of these

Option D
Explanation:

Player 3 of Team X has the highest total score= 150 hence his average is also highest.

118. The total runs scored by the highest run scorer of team X is by what percent greater/lower than the total runs scored by the highest run scorer from Team Y?



- A) 15.67%
- B) 36.36%
- C) 26.66%
- D) 18.88%
- E) None of these

Option B

Explanation:

Highest run scorer in Team X= Player 3=150

Highest run scorer in Team Y= Player 3= 110

required %=(150-110)/110 *100=36.36%

119. Run rate is calculated as runs scored per over. Team X played 35 and 46 overs in Inning 1 and Inning 2 respectively. Team Y played 65 and 48 overs in Inning 1 and Inning 2 respectively. Which of the following has the highest run rate?

- A) Team X in Inning 1
- B) Team X in Inning 2
- C) Team Y in Inning 1
- D) Team Y in Inning 2
- E) Cannot be Determined

Option C

Explanation:

$X(1) = 157/35 = 4.48$

$X(2) = 208/46 = 4.52$

$Y(1) = 315/65 = 4.84$

$Y(2) = 160/46 = 3.47$

Hence run rate of team Y in inning 1 is highest =4.84

120. What is the respective ratio between the total runs scored by Team X and Team Y?

- A) 71:95 B) 73:95 C) 71:105 D) 73:105 E) None of these

Option B

Explanation:

365:475 =73:95

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