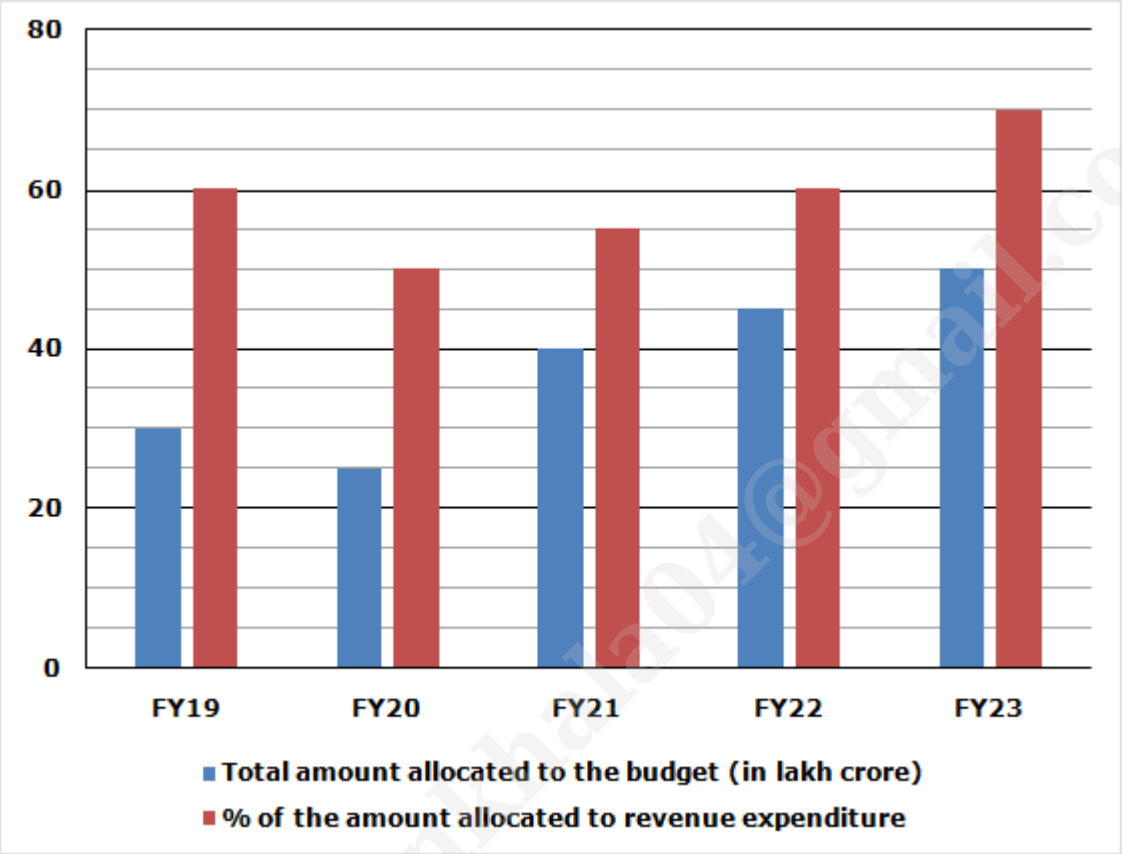
1. Questions

Study the following information carefully and answer the given questions.

The given bar graph shows the total amount allocated to the budget in five financial years (FY) i.e. FY19, FY20, FY21, FY22 and FY23 and the percentage of the amount allocated to revenue expenditure for each of these financial years.

Note: Total budget = Revenue expenditure + Capital expenditure



If the amount allocated to revenue expenditure in FY24 is 20%more than the previous year and the amount allocated to capital expenditure in FY24 is 50% less than the total amount allocated to the budget in FY19, then find the ratio of the amount allocated to capital expenditure to revenue expenditure in FY24.

a. 14:5

b. 5:14

c. 7:12

d. 10:9

e. None of these

2. Questions

Out of the total amount allocated to revenue expenditure in FY20 and FY21, 60% and 75% of the amount is spent on salaries respectively and the remaining amount is spent on different ministries. Find the difference between the amount allocated to revenue expenditure spent on different

ministries in FY20 and FY21.

a. 1.4 lakh crore

b. 0.5 lakh crore

c. 2 lakh crore

d. 1.5 lakh crore

e. 2.2 lakh crore

3. Questions

If the average amount allocated to capital expenditure in FY19, FY22, FY23 and FY25 is 17.5 lakh crore and the ratio of the amount allocated to revenue expenditure to capital expenditure in FY25 is 4:1, then find the sum of the amount allocated to revenue expenditure in FY23 and FY25.

a. 100 lakh crore

b. 65 lakh crore

c. 135 lakh crore

d. 120 lakh crore

e. None of these

4. Questions

The amount allocated to revenue expenditure and capital expenditure in FY27 is X% less and Y% more than that in FY23 and the ratio of the total amount allocated to the budget in FY21 to FY27 is 10:13. Find the amount allocated to revenue expenditure in FY27 if (X + Y) = 80.

a. 20 lakh crore

b. 32 lakh crore

c. 28 lakh crore

d. 30 lakh crore

e. 24 lakh crore

5. Questions

The total amount allocated to the budget in FY22 is what percentage of the total amount allocated to capital expenditure in FY19 and FY21 together?

a. 80%

b. 150%

c. 75%

d. 100%

e. 125%

6. Questions

Read the following information carefully and answer the given questions.

There are 900 students in school P and they like three different types of colour namely i.e. Red, Blue and Black. (20/3)% of the students who like both red and blue but not black and the number of students who like both red and blue is 98. The number of students who like at least two colour is 274. The ratio of the number of students who like both red and black but not blue to the number of students who like both blue and black but not red is 5:6. The number of students who like colour but not blue is 514 and the total number of students who like black is 338.

If the ratio of the total number of boys who like red to the total number of girls who like blue is 48:31 and the total number of girls who like red is equal to the total number of boys who like blue, then find the total number of girls who like red.

a. 200

b. 160

c. 100

d. 180

e. 110

7. Questions

If the total number of boys who like exactly one colour is 326 and the ratio of the number of girls who like only red, only black and only blue is 5:2:3 respectively, then find the number of boys who like only red.

a. 160

b. 180

c. 170

d. 190

e. None of these

8. Questions

The number of students who like only blue is what percentage more than the number of students who like both red and black but not blue?

a. 100%

b. 140%

c. 110%

d. 130%

e. 150%

9. Questions

If the total number of students in school R is 62.5% of the total number of students who like red in school P and the number of girls in school R is five times the number of students who like all three colour in school P, then find the number of boys in school R.

a. 120

b. 150

c. 115

d. 175

e. 100

10. Questions

Find the ratio of the number of students who like at most one colour to the total number of students who like exactly two colour.

a. 323:128

b. 267:130

c. 313:118

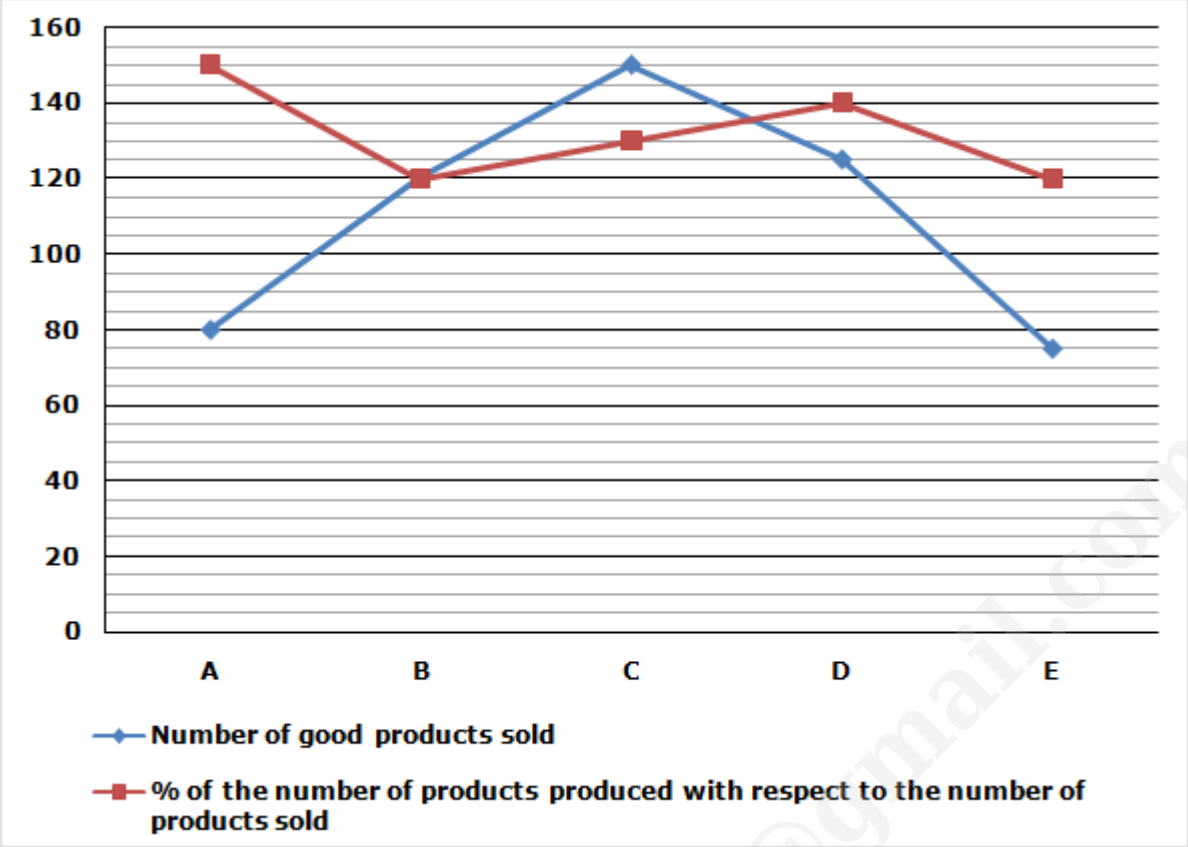
d. 110:117

e. None of these

11. Questions

Study the following information carefully and answer the given questions.

The given line graph shows the number of good products sold by five different companies i.e. A, B, C, D and E and the percentage of the number of products produced with respect to the number of good products sold by these companies.



Note: Total number of products produced = Number of good products sold + Number of good and damaged products unsold

If the total number of products produced by company X is 75% of the number of good products sold by company B and the number of products unsold by company X is one-third of the number of good products sold by company C, then find the number of products sold by company X.

a. 40

b. 54

c. 39

d. 45

e. None of these

12. Questions

In company D, if all of its damaged products are sold increasing their sales by 20%. Find the difference between the number of good products unsold by company D and the number of good products sold by company E.

a. 40

b. 75

c. 50

d. 60

e. 25

13. Questions

If the total number of products produced by companies D and F together is Y and the number of good products sold by company F is 20% more than that of company B and the ratio of the number of good and damaged products unsold by company C to company F is 5:4, then find the value of Y.

a. 290

b. 355

c. 410

d. 275

e. 310

14. Questions

The number of good and damaged products unsold by company C is what percentage of the total number of products produced by company A?

a. 37.5%

b. 21.8%

c. 44.4%

d. 51.2%

e. 33.3%

15. Questions

If the number of damaged products unsold by company D is 10 more than the number of good products unsold in that company, then find the ratio of the number of good products unsold by company D to the total number of products produced by company E.

a. 2:9

b. 7:4

c. 3:5

d. 8:7

e. 5:11

16. Questions

Ram invested a certain amount in two schemes A and B in the ratio of 11:13 for simple interest. The ratio of the rate of interest offered in scheme A to scheme B is x:y. After two years, he received an equal interest from both schemes. Find the ratio of the value of (x^2+1) to (14y-1).

a. 1:1

b. 10:9

c. 11:6

d. 5:7

e. 13:9

17. Questions

What quantities of the first and second mixture should be combined to produce 90 liters of a new mixture with an equal amount of coffee and cream, given that the ratio of coffee to cream in the first mixture is 7:8 and in the second mixture is 2:1?

a. 75 & 15 liters

b. 45 & 45 liters

c. 60 & 30 liters

d. 15 & 75 liters

e. None of these

18. Questions

Three types of products A, B and C are sold in the ratio of 4:7:9 respectively. If the number of products A and B sold is increased by 30 each and the number of product C sold is decreased by 50, then the number of product A sold becomes 1/3rd of the total number of all three products sold. Find the number of product B sold finally.

a. 100

b. 130

c. 110

d. 170

e. 150

19. Questions

A shopkeeper bought 50 liters of milk at Rs.25 per liter. He sold sixty percent of the total quantity of milk at a profit of 33.33%. At what price per liter should he sell the remaining quantity to make anoverall profit of 20%?

a. Rs.35

b. Rs.25

c. Rs.30

d. Rs.20

e. None of these

20. Questions

Ram can complete 40% of the work in 12 days by working with 50% of his actual efficiency. Raju and Rahul together complete the work in 8 days. In how many days can Ram and Raju complete a piece of work by working together if Rahul can complete 200% of the work in 80 days?

a. 5

b. 6

c. 15

d. 10

e. None of these

21. Questions

5 years hence, the ratio of the age of A to B is 7:6. 5 years ago, the ratio of the age of A to B is 5:4. If the present age of A is 50% more than that of C and the average present age of A, B, C and D is 32.5 years, then find the present age of D.

a. 65 years

b. 48 years

c. 70 years

d. 55 years

e. 36 years

22. Questions

The distance between two cities A and B is 150 km. Express Thunderbolt starts from city A to city B at 60 km/hr. Twenty minutes later, Express Lighting startsfrom city B to city A on a parallel track at 70 km/hr. How far from city A will they meet?

a. 80

b. 40

c. 60

d. 70

e. None of these

23. Questions

The length and breadth of a rectangle are in the ratio of 2:5. If the length and breadth of the rectangle are increased by 30% and 10% respectively, then the perimeter of the new rectangle is 324 meters. Find the initial area of the rectangle.

a. 6000 m^2

b. 3600 m^2

c. 4000 m^2

d. 2800 m^2

e. None of these

24. Questions

Ram and Raju started a business with investments of Rs.32000 and Rs.48000 respectively. At the end of one year, they pay 20% of their profit as corporate taxes and the rest of the profit is distributed among them according to their investment share. If the profit share of Ram isRs.8000, then what is the total profit of the business?

a. 32000

b. 22000

c. 25000

d. 30000

e. 18000

25. Questions

The total time taken by the boat to cover 120 km downstream and 80 km upstream together in 10 hours. If the speed of the boat in still water is 125% of the upstream speed of the boat, then find the time taken by the boat to cover 140 km in still water.

a. 4 hours

b. 10 hours

c. 5 hours

d. 7 hours

e. None of these

26. Questions

Find out the wrong number in the following number series.

127, 131, 133, 139, 149, 151

a. 127

b. 131

c. 133

d. 139

e. 151

27. Questions

5, 8, 13, 21, 35, 55, 89

a. 5

b. 8

c. 13

d. 35

e. 55

28. Questions

110, 112, 120, 129, 192, 218

a. 112

b. 120

c. 129

d. 192

e. 218

29. Questions

5, 11, 34, 137, 681, 4117

a. 5

b. 11

c. 34

d. 137

e. 681

30. Questions

8, 15, 32, 59, 95, 143

a. 15

b. 32

c. 59

d. 95

e. 143

31. Questions

The following question contains two equations as I and II. You have to solve both equations and determine the relationship between them and give the answer as,

I). $x^2 + 8x + 15 = 0$

II). $y^2 - 8y + 15 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

32. Questions

I). $x^2 - (32/3)x + 85/3 = 0$

II). $2y^2 - 29y + 105 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined.

d. $x < y$

e. $x \leq y$

33. Questions

I). $x^2 - 28x + 171 = 0$

II). $y^2 + 5y - 126 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

34. Questions

I). $5x^2 - 31x + 6 = 0$

II). $y^2 - 21y + 68 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

35. Questions

I). $4x^2 + 41x + 100 = 0$

II). $y^2 + 43y + 450 = 0$

a. $x > y$

b. $x \geq y$

c. $x = y$ or relationship can't be determined

d. $x < y$

e. $x \leq y$

36. Questions

What value should come in the place of (?) in the following questions?

(120 * 6 ÷ 5) + (880 * 7 ÷ 10) = ?* √1444

a. 27

b. 45

c. 61

d. 38

e. 20

37. Questions

(100 - √8100) * 2.5 + 55 + 16 * 5 = ? + 110

a. 35

b. 50

c. 70

d. 45

e. 20

38. Questions

(9/11) of (154/108) of (144/7) = ?^{3}– 40

a. 4

b. 5

c. 9

d. 3

e. 8

39. Questions

√32400 + √6400 + $\sqrt[3]{729}$ = √? + 73 * 3

a. 3600

b. 2500

c. 4000

d. 8100

e. 1600

40. Questions

(77 + 84)/23 + (252 + 486)/41= 8* ? - 7

a. 4

b. 10

c. 5

d. 9

e. 13

Explanations:

1. Questions

FY19:

The amount allocated to revenue expenditure = 30 * 60/100 = 30 * 0.6 = 18 lakh crore

The amount allocated to capital expenditure = 30 - 18 = 12 lakh crore

FY20:

The amount allocated to revenue expenditure = 25 * 50/100 = 25 * 0.5 = 12.5 lakh crore

The amount allocated to capital expenditure = 25 – 12.5 = 12.5 lakh crore

FY21:

The amount allocated to revenue expenditure = 40 * 50/100 = 40 * 0.55 = 22 lakh crore

The amount allocated to capital expenditure = 40 - 22 = 18 lakh crore

FY22:

The amount allocated to revenue expenditure = 45 * 60/100 = 45 * 0.6 = 27 lakh crore

The amount allocated to capital expenditure = 45 - 27 = 18 lakh crore

FY23:

The amount allocated to revenue expenditure = 50 * 70/100 = 50 * 0.7 = 35 lakh crore

The amount allocated to capital expenditure = 50 - 35 = 15 lakh crore

Years	The total amount allocated to the budget (in lakh crore)	The amount allocated to revenue expenditure (in lakh crore)	The amount allocated to capital expenditure (in lakh crore)
FY19	30	18	12
FY20	25	12.5	12.5
FY21	40	22	20
FY22	45	27	18
FY23	50	35	15

Answer: B

FY24,

The amount allocated to revenue expenditure = 35 * 120/100 = 42 lakh crore

The amount allocated to capital expenditure = 30 * (100 – 50)/100 = 30 * 50/100 = 15 lakh crore

Required ratio = 15:42 = 5:14

2. Questions

FY19:

The amount allocated to revenue expenditure = 30 * 60/100 = 30 * 0.6 = 18 lakh crore

The amount allocated to capital expenditure = 30 - 18 = 12 lakh crore

FY20:

The amount allocated to revenue expenditure = 25 * 50/100 = 25 * 0.5 = 12.5 lakh crore

The amount allocated to capital expenditure = 25 – 12.5 = 12.5 lakh crore

FY21:

The amount allocated to revenue expenditure = 40 * 50/100 = 40 * 0.55 = 22 lakh crore

The amount allocated to capital expenditure = 40 - 22 = 18 lakh crore

FY22:

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FY19	30	18	12
FY20	25	12.5	12.5
FY21	40	22	20
FY22	45	27	18
FY23	50	35	15

Answer: B

The amount allocated to revenue expenditure spent on different ministries in FY20 = 12.5 * (100 – 60)/100 = 12.5 * 40/100 = 5 lakh crore

The amount allocated to revenue expenditure spent on different ministries in FY21 = 22 * (100 – 75)/100 = 22 * 25/100 = 5.5 lakh crore

Required difference = 5.5 – 5 = 0.5 lakh crore

3. Questions

FY19:

The amount allocated to revenue expenditure = 30 * 60/100 = 30 * 0.6 = 18 lakh crore

The amount allocated to capital expenditure = 30 - 18 = 12 lakh crore

FY20:

The amount allocated to revenue expenditure = 25 * 50/100 = 25 * 0.5 = 12.5 lakh crore

The amount allocated to capital expenditure = 25 – 12.5 = 12.5 lakh crore

FY21:

The amount allocated to revenue expenditure = 40 * 50/100 = 40 * 0.55 = 22 lakh crore

The amount allocated to capital expenditure = 40 - 22 = 18 lakh crore

FY22:

The amount allocated to revenue expenditure = 45 * 60/100 = 45 * 0.6 = 27 lakh crore

The amount allocated to capital expenditure = 45 - 27 = 18 lakh crore

FY23:

The amount allocated to revenue expenditure = 50 * 70/100 = 50 * 0.7 = 35 lakh crore

The amount allocated to capital expenditure = 50 - 35 = 15 lakh crore

Years	The total amount allocated to the budget (in lakh crore)	The amount allocated to revenue expenditure (in lakh crore)	The amount allocated to capital expenditure (in lakh crore)
FY19	30	18	12
FY20	25	12.5	12.5
FY21	40	22	20
FY22	45	27	18
FY23	50	35	15

Answer: C

The total amount allocated to capital expenditure in FY19, FY22, FY23 and FY25 = 17.5 * 4 = 70 lakh crore

The amount allocated to capital expenditure in FY25 = 70 – (12 + 18 + 15) = 25 lakh crore

The amount allocated to revenue expenditure in FY25 = 25 * 4/1 = 100 lakh crore

Required sum = 35 + 100 = 135 lakh crore

4. Questions

FY19:

The amount allocated to revenue expenditure = 30 * 60/100 = 30 * 0.6 = 18 lakh crore

The amount allocated to capital expenditure = 30 - 18 = 12 lakh crore

FY20:

The amount allocated to revenue expenditure = 25 * 50/100 = 25 * 0.5 = 12.5 lakh crore

The amount allocated to capital expenditure = 25 – 12.5 = 12.5 lakh crore

FY21:

The amount allocated to revenue expenditure = 40 * 50/100 = 40 * 0.55 = 22 lakh crore

The amount allocated to capital expenditure = 40 - 22 = 18 lakh crore

FY22:

The amount allocated to revenue expenditure = 45 * 60/100 = 45 * 0.6 = 27 lakh crore

The amount allocated to capital expenditure = 45 - 27 = 18 lakh crore

FY23:

The amount allocated to revenue expenditure = 50 * 70/100 = 50 * 0.7 = 35 lakh crore

The amount allocated to capital expenditure = 50 - 35 = 15 lakh crore

Years	The total amount allocated to the budget (in lakh crore)	The amount allocated to revenue expenditure (in lakh crore)	The amount allocated to capital expenditure (in lakh crore)
FY19	30	18	12
FY20	25	12.5	12.5
FY21	40	22	20
FY22	45	27	18
FY23	50	35	15

Answer: C

The total amount allocated to the budget in FY27 = 40 * 13/10 = 52 lakh crore

35 * (100 – X)/100 + 15 * (100 + Y)/100 = 52

7(100 – X) + 3(100 + Y) = 52 * 100/5

3Y – 7X = 1040

3Y – 7X = 40 ---(1)

(X + Y) = 80 ---(2)

From equations (1) and (2) * 3,

X = 20

The amount allocated to the revenue expenditure in FY27 = 35 * (100 – 20)/100 = 28 lakh crore

5. Questions

FY19:

The amount allocated to revenue expenditure = 30 * 60/100 = 30 * 0.6 = 18 lakh crore

The amount allocated to capital expenditure = 30 - 18 = 12 lakh crore

FY20:

The amount allocated to revenue expenditure = 25 * 50/100 = 25 * 0.5 = 12.5 lakh crore

The amount allocated to capital expenditure = 25 – 12.5 = 12.5 lakh crore

FY21:

The amount allocated to revenue expenditure = 40 * 50/100 = 40 * 0.55 = 22 lakh crore

The amount allocated to capital expenditure = 40 - 22 = 18 lakh crore

FY22:

The amount allocated to revenue expenditure = 45 * 60/100 = 45 * 0.6 = 27 lakh crore

The amount allocated to capital expenditure = 45 - 27 = 18 lakh crore

FY23:

The amount allocated to revenue expenditure = 50 * 70/100 = 50 * 0.7 = 35 lakh crore

The amount allocated to capital expenditure = 50 - 35 = 15 lakh crore

Years	The total amount allocated to the budget (in lakh crore)	The amount allocated to revenue expenditure (in lakh crore)	The amount allocated to capital expenditure (in lakh crore)
FY19	30	18	12
FY20	25	12.5	12.5
FY21	40	22	20
FY22	45	27	18
FY23	50	35	15

Answer: B

The total amount allocated to capital expenditure in FY19 and FY21 together = 12 + 18 = 30 lakh crore

Required % = 45/30 * 100 = 150%

6. Questions

The number of students who like both red and blue but not black = 900 * (20/3)/100 = 60

The number of students who like all three colour = 98 – 60 = 38

Let the number of students who like both red and black but not blue be 5x.

And the number of students who like both blue and black but not red = 5x * 6/5 = 6x

5x + 6x = 274 – (38 + 60)

x = 176/11 = 16

The number of students who like both red and black but not blue = 5 * 16 = 80

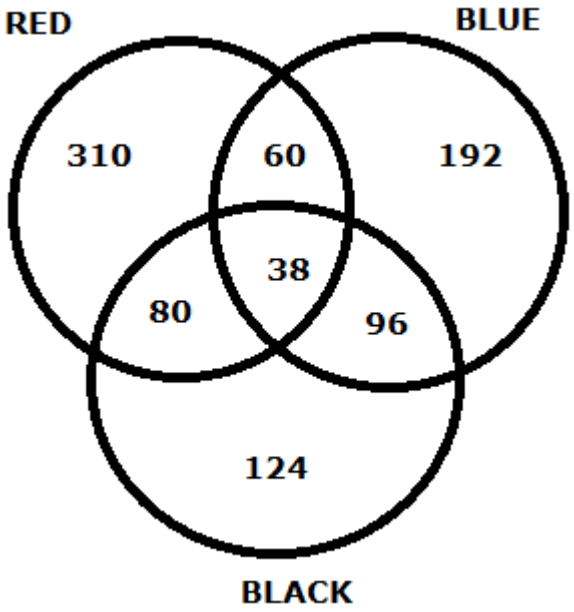
The number of students who like both blue and black but not red = 6 * 16 = 96

The total number of students who like blue = 900 – 514 = 386

The number of students who like only blue = 386 – (60 + 96 + 38) = 192

The number of students who like only black = 338 – (96 + 80 + 38) = 124

The number of students who like only red = 514 – (80 + 124) = 310



Answer: A

Let the total number of girls who like red and the total number of boys who like blue be x each.

Let the total number of boys who like red and the total number of girls who like blue be 48y and 31y respectively.

The total number of students who like red in school P = 310 + 60 + 38 + 80 = 488

The total number of students who like blue = 900 – 514 = 386

48y + x = 488 ---(1)

31y + x = 386 ---(2)

From equations (1) and (2),

y = 6 and x = 200

The total number of girls who like red = 200

7. Questions

The number of students who like both red and blue but not black = 900 * (20/3)/100 = 60

The number of students who like all three colour = 98 – 60 = 38

Let the number of students who like both red and black but not blue be 5x.

And the number of students who like both blue and black but not red = 5x * 6/5 = 6x

5x + 6x = 274 – (38 + 60)

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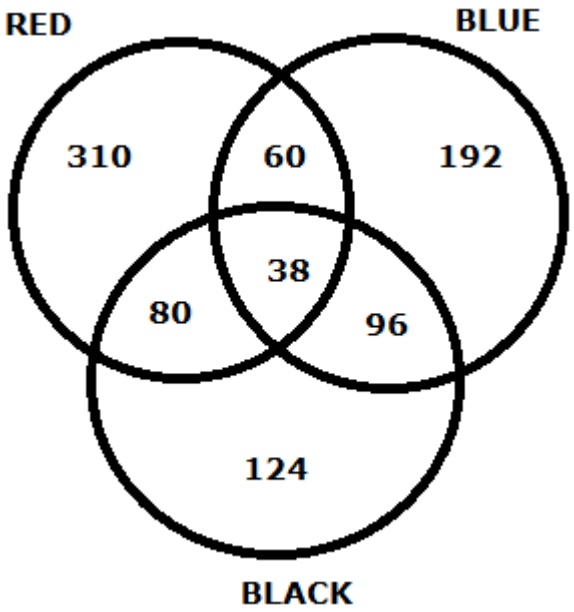

Answer: A

The total number of students who like exactly one colour = 310 + 192 + 124 = 626

The total number of girls who like exactly one colour = 626 – 326 = 300

The number of girls who like only red colour = 300 * 5/(5 + 2 + 3) = 300 * 5/10 = 150

The number of boys who like only red colour = 310 – 150 = 160

8. Questions

The number of students who like both red and blue but not black = 900 * (20/3)/100 = 60

The number of students who like all three colour = 98 – 60 = 38

Let the number of students who like both red and black but not blue be 5x.

And the number of students who like both blue and black but not red = 5x * 6/5 = 6x

5x + 6x = 274 – (38 + 60)

x = 176/11 = 16

The number of students who like both red and black but not blue = 5 * 16 = 80

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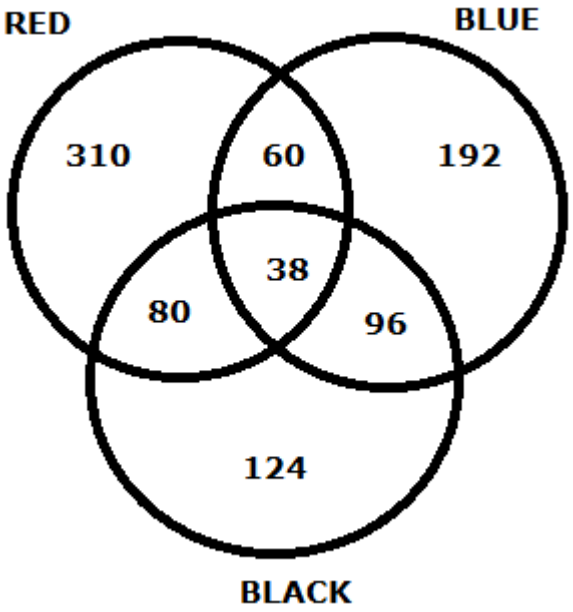

Answer: B

Required % = (192 – 80)/80 * 100 = 112/80 * 100 = 140%

9. Questions

The number of students who like both red and blue but not black = 900 * (20/3)/100 = 60

The number of students who like all three colour = 98 – 60 = 38

Let the number of students who like both red and black but not blue be 5x.

And the number of students who like both blue and black but not red = 5x * 6/5 = 6x

5x + 6x = 274 – (38 + 60)

x = 176/11 = 16

The number of students who like both red and black but not blue = 5 * 16 = 80

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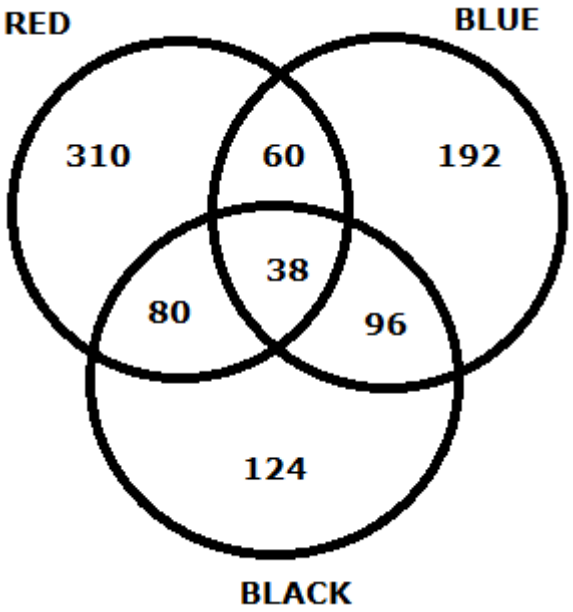

Answer: C

The total number of students who like red in school P = 310 + 60 + 38 + 80 = 488

The total number of students in school R = 488 * 62.5/100 = 305

The number of girls in school R = 38 * 5 = 190

The number of boys in school R = 305 – 190 = 115

10. Questions

The number of students who like both red and blue but not black = 900 * (20/3)/100 = 60

The number of students who like all three colour = 98 – 60 = 38

Let the number of students who like both red and black but not blue be 5x.

And the number of students who like both blue and black but not red = 5x * 6/5 = 6x

5x + 6x = 274 – (38 + 60)

x = 176/11 = 16

The number of students who like both red and black but not blue = 5 * 16 = 80

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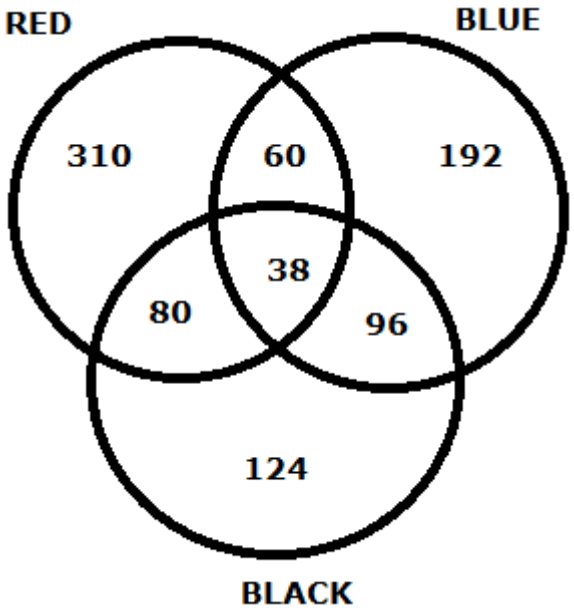
The total number of students who like blue = 900 – 514 = 386

The number of students who like only blue = 386 – (60 + 96 + 38) = 192

The number of students who like only black = 338 – (96 + 80 + 38) = 124

The number of students who like only red = 514 – (80 + 124) = 310



Answer: C

The number of students who like at most one color = 310 + 124 + 192 = 626

The number of students who like exactly two colour= 80 + 60 + 96 = 236

Required ratio = 626:236 = 313:118

11. Questions

Company A:

Total number of products produced = 80 * 150/100 = 80*1.5=120

Number of good and damaged products unsold = 120 - 80 =40

Company B:

Total number of products produced = 120 * 120/100 = 120*1.2=144

Number of good and damaged products unsold =144 – 120 = 24

Company C:

Total number of products produced = 150 * 130/100 = 150*1.3=195

Number of good and damaged products unsold = 195 – 150 =45

Company D:

Total number of products produced = 125 * 140/100 = 125*1.4=175

Number of good and damaged products unsold = 175 – 125 =50

Company E:

Total number of products produced = 75 * 120/100 =75*1.2=90

Number of good and damaged products unsold = 90 – 75 =15

Companies	Total number of products produced	Number of good products sold	Number of good and damaged products unsold
A	120	80	40
B	144	120	24
C	195	150	45
D	175	125	50
E	90	75	15

Answer: A

Total number of products produced by company X =120 * 75/100 = (3/4) * 120 = 90

Number of products unsold by company X = 150/3 = 50

Number of products sold by company X = 90-50 = 40

12. Questions

Company A:

Total number of products produced = 80 * 150/100 = 80*1.5=120

Number of good and damaged products unsold = 120 - 80 =40

Company B:

Total number of products produced = 120 * 120/100 = 120*1.2=144

Number of good and damaged products unsold =144 – 120 = 24

Company C:

Total number of products produced = 150 * 130/100 = 150*1.3=195

Number of good and damaged products unsold = 195 – 150 =45

Company D:

Total number of products produced = 125 * 140/100 = 125*1.4=175

Number of good and damaged products unsold = 175 – 125 =50

Company E:

Total number of products produced = 75 * 120/100 =75*1.2=90

Number of good and damaged products unsold = 90 – 75 =15

Companies	Total number of products produced	Number of good products sold	Number of good and damaged products unsold
A	120	80	40
B	144	120	24
C	195	150	45
D	175	125	50
E	90	75	15

Answer: C

Total number of good and damaged products sold by company D = 125 * 120/100 = 150

Number of damaged products in company D = 150-125=25

Number of good products unsold by company D = 50 – 25 = 25

Required difference = 75-25=50

13. Questions

Company A:

Total number of products produced = 80 * 150/100 = 80*1.5=120

Number of good and damaged products unsold = 120 - 80 =40

Company B:

Total number of products produced = 120 * 120/100 = 120*1.2=144

Number of good and damaged products unsold =144 – 120 = 24

Company C:

Total number of products produced = 150 * 130/100 = 150*1.3=195

Number of good and damaged products unsold = 195 – 150 =45

Company D:

Total number of products produced = 125 * 140/100 = 125*1.4=175

Number of good and damaged products unsold = 175 – 125 =50

Company E:

Total number of products produced = 75 * 120/100 =75*1.2=90

Number of good and damaged products unsold = 90 – 75 =15

Companies	Total number of products produced	Number of good products sold	Number of good and damaged products unsold
A	120	80	40
B	144	120	24
C	195	150	45
D	175	125	50
E	90	75	15

Answer: B

Number of good products sold by company F = 120*120/100=144

Number of good and damaged products unsold by company F = 45*4/5=36

Total number of products produced by company F = 144 + 36 = 180

Y= 175 + 180 =355

14. Questions

Company A:

Total number of products produced = 80 * 150/100 = 80*1.5=120

Number of good and damaged products unsold = 120 - 80 =40

Company B:

Total number of products produced = 120 * 120/100 = 120*1.2=144

Number of good and damaged products unsold =144 – 120 = 24

Company C:

Total number of products produced = 150 * 130/100 = 150*1.3=195

Number of good and damaged products unsold = 195 – 150 =45

Company D:

Total number of products produced = 125 * 140/100 = 125*1.4=175

Number of good and damaged products unsold = 175 – 125 =50

Company E:

Total number of products produced = 75 * 120/100 =75*1.2=90

Number of good and damaged products unsold = 90 – 75 =15

Companies	Total number of products produced	Number of good products sold	Number of good and damaged products unsold
A	120	80	40
B	144	120	24
C	195	150	45
D	175	125	50
E	90	75	15

Answer: A

Required percentage = 45/120 * 100 = 37.5%

15. Questions

Company A:

Total number of products produced = 80 * 150/100 = 80*1.5=120

Number of good and damaged products unsold = 120 - 80 =40

Company B:

Total number of products produced = 120 * 120/100 = 120*1.2=144

Number of good and damaged products unsold =144 – 120 = 24

Company C:

Total number of products produced = 150 * 130/100 = 150*1.3=195

Number of good and damaged products unsold = 195 – 150 =45

Company D:

Total number of products produced = 125 * 140/100 = 125*1.4=175

Number of good and damaged products unsold = 175 – 125 =50

Company E:

Total number of products produced = 75 * 120/100 =75*1.2=90

Number of good and damaged products unsold = 90 – 75 =15

Companies	Total number of products produced	Number of good products sold	Number of good and damaged products unsold
A	120	80	40
B	144	120	24
C	195	150	45
D	175	125	50
E	90	75	15

Answer: A

Number of good products unsold by company D = (50 – 10)/2 = 40/2 = 20

Required ratio= 20:90=2:9

16. Questions

Answer: B

Let the amount invested in schemes A and B be 11a and 13a respectively.

11a * x * 2/100 = 13a * y * 2/100

x/y = 13/11

x = 13 and y = 11

Required ratio = $(x^2+1):(14y-1) = (13^2 + 1):(14 * 11 - 1) = 170:153 = 10:9$

17. Questions

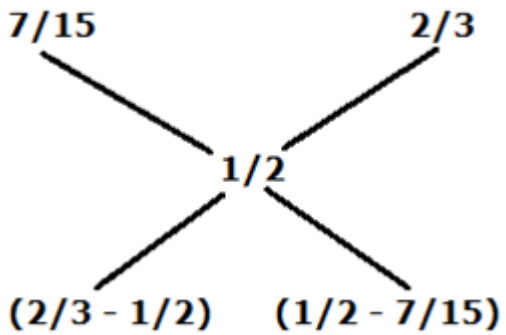
Answer: A

The amount of coffee in the first mixture = 7/(7 + 8) = 7/15

The amount of cream in the second mixture = 2/(2 + 1) = 2/3

Ratio of coffee to cream in the new mixture = 1:1

The amount of coffee in the new mixture = 1/(1 + 1) = 1/2



The ratio of the amount of mixture in the first mixture to the second mixture = (2/3 – 1/2):(1/2 – 7/15) = 5:1

First mixture = 90 * 5/(5 + 1) = 90 * 5/6 = 75 liters

Second mixture = 90 – 75 = 15liters

Required answer = 75 and 15 liters

18. Questions

Answer: A

Let the number of products A, B and C sold be 4x, 7x and 9x respectively.

(4x + 30)/[(7x + 30) + (9x – 50)] = 1/(3 – 1)

(4x + 30) * 2 = 16x – 20

16x – 8x = 60 + 20

x = 80/8 = 10

The number of product sold finally= 7 * 10 + 30 = 100

19. Questions

Answer: B

Total cost price = 50*25=Rs.1250

Total selling price = 50*(25*(6/5))=Rs.1500

60% of 50 liters = 50 * 60/100 = 30 liters

Remaining milk in 50 liters = 50 – 30 = 20 liters

Total selling price of 60% of the total quantity of milk sold at 33.33% profit = 30 * (25 * 133.33/100) = 30 * 25 * 4/3 = Rs.1000

Total selling price of 40% of the total quantity of milk = 1500 – 1000 = Rs.500

Remaining 40% selling price = 500/20=Rs.25

20. Questions

Answer: B

Ram can complete thewhole work with 50% of his actual efficiency = 12 * 100/40 = 30 days

Ram can complete thewhole work with his actual efficiency = 30 * 50/100 = 15 days

Rahul complete 100% of the work = 80 * 1/2 = 40 days

Raju can complete the whole work = 1/8 – 1/40 = (5 – 1)/40 = 10 days

Ram and Raju working together to complete the work =1/15+1/10= (2 + 3)/30 = 5/30 = 6 days

21. Questions

Answer: D

$(7x – 5 - 5)/(6x – 5 – 5) = 5/4$

$(7x – 10)/(6x – 10) = 5/4$

$28x – 40 = 30x – 50$

$x = 10/2 = 5$

The present age of A = 7 * 5 – 5 = 35 – 5 = 30 years

The present age of B = 6 * 5 – 5 = 30 – 5 = 25 years

The present age of C = 30 * 100/150 = 20 years

The present age of D = 32.5 * 4 – (30 + 25 + 20) = 130 – 75 = 55 years

22. Questions

Answer: A

For 20 minutes express Thunderbolt traveled = 60 * 20/60 = 20 km

Distance between two express when Lighting startsfrom city B= 150 – 20 = 130 km

Let the time taken by express Thunderbolt and Lighting to meet each other in 130 km be x hours each.

60 * x + 70 * x = 130

x = 130/130 = 1

The time taken by express Thunderbolt to meet express Lighting = 20 + 1 * 60 = 80 minutes

Required distance = 60 * 80/60 = 80 km

23. Questions

Answer: C

Let the initial length of the rectangle be 20x meters.

And the breadth of the rectangle = 20x * 5/2 = 50x meters

Increased length of the rectangle = 20x * 130/100 =20x*1.3=26x

Increased breadth of the rectangle = 50x * 110/100 = 50x*1.1=55x

2(l+b) = 324

2*(26x+55x) =324

x=162/81=2

The initial breadth of the rectangle = 50 * 2 = 100 meters

The initial length of the rectangle = 20 * 2 = 40 meters

The initial area of rectangle =40*100=4000 m^2

24. Questions

Answer: C

The ratio of the profit share of Ram to Raju = (32000 * 1) : (48000 * 1) = 2:3

The sum of the profit share of Ram and Raju = 8000 * (2 + 3)/2 = 8000 * 5/2 = Rs.20000

The total profit of the business= 20000 * 100/(100 – 20) = Rs.25000

25. Questions

Answer: D

Let the upstream speed of the boat = 4a

The speed of the boat in still water = 4a * 125/100 = 5a

The speed of the stream = 5a – 4a = 1a

120/(5a + 1a) + 80/(5a – 1a) = 10

120/6a + 80/4a = 10

20/a + 20/a = 10

a = 40/10= 4

The speed of the boat in still water = 5 * 4 = 20 km/hr

Required time = 140/20 = 7 hours

26. Questions

Answer: C

Prime number series = 127, 131, **137**, 139, 149, 151

27. Questions

Answer: D

5 + 8 = 13

8 + 13 = 21

13 + 21 = **34**

21 + 34 = 55

34 + 55 = 89

28. Questions

Answer: B

$110 + 1^2 + 1 = 112$

$112 + 2^3 - 1 =$ **119**

$119 + 3^2 + 1 = 129$

$129 + 4^3 - 1 = 192$

$192 + 5^2 + 1 = 218$

29. Questions

Answer: E

$5 * 2 + 1 = 11$

$11 * 3 + 1 = 34$

$34 * 4 + 1 = 137$

$137 * 5 + 1 =$ **686**

$686 * 6 + 1 = 4117$

30. Questions

Answer: D

$8 + 7 = 15$

$15 + 17 = 32$

$32 + 27 = 59$

$59 + 37 =$ **96**

$96 + 47 = 143$

31. Questions

Answer: D

$x^2 + 8x + 15 = 0$

$x^2 + 5x + 3x + 15 = 0$

$x(x + 5) + 3(x + 5) = 0$

$x = -5, -3$

$y^2 – 8y + 15 = 0$

$y^2 – 5y – 3y + 15 = 0$

$y(y – 5) – 3(y – 5) = 0$

$y = +5, +3$

Hence, $x < y$

32. Questions

Answer: D

$x^2 – (32/3)x + 85/3 = 0$

$3x^2 - 32x + 85 = 0$

$3x^2 - 15x - 17x + 85 = 0$

$3x(x - 5) - 17(x - 5) = 0$

$x = +5, +17/3$

$2y^2 - 29y + 105 = 0$

$2y^2 - 14y - 15y + 105 = 0$

$2y(y - 7) - 15(y - 7) = 0$

$y = +7, +15/2$

Hence, $x < y$

33. Questions

Answer: B

$x^2 - 28x + 171 = 0$

$x^2 - 19x - 9x + 171 = 0$

$x(x - 19) - 9(x - 19) = 0$

$x = +19, +9$

$y^2 + 5y - 126 = 0$

$y^2 + 14y - 9y - 126 = 0$

$y(y + 14) - 9(y + 14) = 0$

$y = -14, +9$

Hence, $x \geq y$

34. Questions

Answer: C

$5x^2 - 31x + 6 = 0$

$5x^2 - 30x - 1x + 6 = 0$

$5x(x - 6) - 1(x - 6) = 0$

$x = +6, +1/5$

$y^2 - 21y + 68 = 0$

$y^2 - 4y - 17y + 68 = 0$

$y(y - 4) - 17(y - 4) = 0$

$y = +4, +17$

The relationship can't be determined.

35. Questions

Answer: A

$4x^2 + 41x + 100 = 0$

$4x^2 + 16x + 25x + 100 = 0$

$4x(x + 4) + 25(x + 4) = 0$

$x = -4, -25/4$

$y^2 + 43y + 450 = 0$

$y^2 + 18y + 25y + 450 = 0$

$y(y + 18) + 25(y + 18) = 0$

$y = -18, -25$

Hence, $x > y$

36. Questions

Answer: E

$(120 * 6 \div 5) + (880 * 7 \div 10) = ? * \sqrt{1444}$

$144 + 616 = ? * 38$

$? = 760/38 = 20$

37. Questions

Answer: B

$(100 - \sqrt{8100}) * 2.5 + 55 + 16 * 5 = ? + 110$

$? = (100 - 90) * 2.5 + 135 - 110$

$? = 25 + 25 = 50$

38. Questions

Answer: A

$(9/11)$ of $(154/108)$ of $(144/7) = ?^3 - 40$

$?^3 = 14/12 * 144/7 + 40 = 24+40=64=4^3$

$?=4$

39. Questions

Answer: B

$\sqrt{32400} + \sqrt{6400} + \sqrt[3]{729} = \sqrt{?} + 73 * 3$

$180+80+9=\sqrt{?}+219$

$\sqrt{?}=269-219=50$

$?=2500$

40. Questions

Answer: A

$(77 + 84)/23 + (252 + 486)/41= 8* ? - 7$

$161/23 + 738/41 + 7 = 8?$

$8? = 7 + 18 + 7$

$? = 32/8 = 4$