# IBPS PO Prelims 2019 Previous Year Questions (Quant)

Direction (1 – 6) : What should come in place of the question mark '?' in the following number series?

1. 48, 63, 52, 67, ?, 71
A. 52
B. 60
C. 54
D. 62
E. 56

2. 17, 29, 53, 101, 197, ?
A. 391
B. 374
C. 383
D. 375
E. 389

3. 15, 24, 52, 117, ?, 460
A. 237
B. 243
C. 257
D. 251
E. 239

4. 16, 21, 31, 45, 62, ?
A. 81
B. 89
C. 87
D. 78
E. 93

5. 6, 11, 27, 86, ?, 1750
A. 349
B. 341
C. 355
D. 351
E. 363

6. 5, 14, 78, 103, 319, ?
A. 368
B. 372
C. 364
D. 354
E. 378

Direction (7 – 12) : Study the following graph carefully and answer the questions given below:
The given bar graph depicting the number of pillows sold by two stores A and B in the given 5 months.
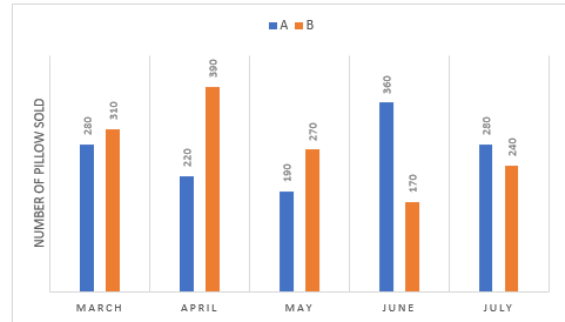
7. What is the respective ratio between total number of pillows sold by store A in June and July together and that by store B in May and June together?
A. 14 : 9
B. 16 : 13
C. 14 : 11
D. 12 : 7
E. 16 : 11

8. If the total number of pillows sold by stores A and B together in August is 230 more than that sold in May, then what is the total number of pillows sold by stores A and B together in August?
A. 690
B. 720
C. 710
D. 680
E. 700

9. The respective ratio between number of pillows sold by store A in February and March is 11 : 7 and the respective ratio between number of pillows sold by store B in February and April is 9 : 13. What is the difference between number of pillows sold by stores A and B in February?
A. 170
B. 160
C. 150
D. 200
E. 180

10. What is the percentage increment in the number of pillows sold by store A from April to June?
A. $63\dfrac{7}{11}$

B. $69\dfrac{3}{11}$

C. $71\frac{1}{11}$

D. $65\frac{5}{11}$

E. $61\frac{4}{11}$

11. What is the average number of pillows sold by store B in March, April and June?
A. 280
B. 300
C. 270
D. 310
E. 290

12. If the total number of pillows sold by stores A and B together in December is 15% less than that in July, then what is the total number of pillows sold by stores A and B together in December?
A. 468
B. 456
C. 436
D. 442
E. 454

13. A shopkeeper mixed two varieties of rice at Rs. 24/kg and Rs. x/kg in the ratio 2 : 3 respectively and sold the mixture at Rs. 29.88/kg at 20% profit. Find the value of x.
A. 25
B. 25.5
C. 27
D. 30
E. None of these

14. There are 8 blue, 5 yellow and 7 red balls. What is the probability of choosing either 1 yellow or red ball?
A. 2/3
B. 3/4
C. 4/5
D. 3/5
E. 1/2

15. Two pipes A and B can fill a tank in 60 hours and 40 hours respectively and pipe C can empty the tank in 15 hours. If pipes A and B are opened for 12 hours, then pipe C is also opened. After how many hours, the tank will be emptied?

A. 15 hours
B. 20 hours
C. 12.5 hours
D. 10 hours
E. None of these

16. In a 96 litre mixture of water and milk, water is only 40%. The milkman sold 12 litres of the mixture to a customer and then added 10 litres of pure milk and 15 litres of water in the mixture. What is the approximate percentage of water in the final mixture?
A. 47
B. 33
C. 45
D. 42
E. 38

Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.
17. I. $3x^2 + 23x + 42 = 0$
II. $y^2 - 42y + 437 = 0$
A. X > Y
B. X < Y
C. X ≥ Y
D. X ≤ Y
E. X=Y or No relation can be established

Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.
18. I. $x^2 + 6x - 135 = 0$
II. $y^2 + 10y - 144 = 0$
A. X > Y
B. X < Y
C. X ≥ Y
D. X ≤ Y
E. X=Y or No relation can be established

Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.
19. $x^2 = 144$
$Y^3 = 1728$
A. X > Y
B. X < Y
C. X ≥ Y
D. X ≤ Y

E. X=Y or No relation can be established

Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.

20. $x^2 = 25$

$y^2 - 1 = 8$

A. X > Y
B. X < Y
C. X ≥ Y
D. X ≤ Y
E. X=Y or No relation can be established

Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.

21. $x^2 - 10x + 24 = 0$

$y^2 - 12y + 35 = 0$

A. X > Y
B. X < Y
C. X ≥ Y
D. X ≤ Y
E. X=Y or No relation can be established

Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.

22. $2x^2 - 19x + 45 = 0$
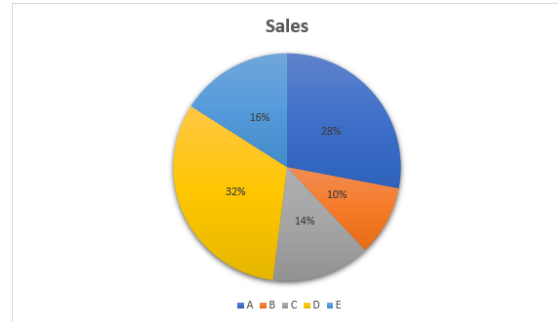
$y^2 - 11y + 30 = 0$

A. X > Y
B. X < Y
C. X ≥ Y
D. X ≤ Y
E. X=Y or No relation can be established

Direction (23 − 27) : Study the pie-chart carefully and answer the following questions:

Given below is the pie chart depicting the total number of shirts sold by 5 stores in in the year 2003.

Total number of shirts sold = 2800

Sales

23. Store D sold only two types of shirts formal and casual. If the average of the number of formal shirts sold by store D is 664, then what is the respective ratio between the number of formal and casual shirts sold by store D?

A. 83 : 27
B. 83 : 21
C. 83 : 31
D. 83 : 29
E. 83 : 19

24. If the average number of shirts sold by store C in 2003 and 2004 is 343, then the number of shirts sold by store C in 2004 is what percent less than the number of shirts sold by the same store in 2003?

A. 20%
B. 35%
C. 30%
D. 15%
E. 25%

25. What is the difference between number of shirts sold by A and that by B?

A. 518
B. 498
C. 516
D. 496
E. 504

26. What is the central angle correspondent to the number of shirts sold by D?

A. 120.8°
B. 112.4°
C. 108.6°
D. 124.4°
E. 115.2°

27. Number of shirts sold by E increased by 50% from 2003 to 2004 & decreased by 25% from 2004 to 2005. What is the number of shirts sold by E in 2005?
A. 504
B. 488
C. 516
D. 498
E. 518

28. Raj give 60% of his monthly salary to his wife and the remaining he invested in mutual fund. Out of the money his wife got, she spent 20% on groceries, 30% on rent and remaining amount of Rs. 18,000 she spent on buying gold. What is Raj's monthly salary?
A. Rs. 50,000
B. Rs. 76,000
C. Rs. 40,000
D. Rs. 60,000
E. Rs. 80,000

29. 4 years ago, the ratio of A's and B's age is 5 : 3. The sum of the present ages of A, B and C is 80 years. If C's present age is equal to the sum of present ages of A and B. What is present age of A?
A. 24 years
B. 20 years
C. 22 years
D. 26 years
E. 18 years

Direction (30 – 35) : Study the following information carefully and answer the given questions.
In the table, the details of total number students and students in class 10 is given.

School	Total number of students (Male + Female)	Number of students (Male + Female) in class 10	Number of females in Class 10
A	250	48	12
B	480	64	10
C	360	80	25

30. In school C, the number of female students in classes other than 10 is 101. What percent of student in school C are female?
A. 30%
B. 46%
C. 26%
D. 40%

E. 35%

31. What is the difference between number of male students in class 10 of school A and that of school B?
A. 12
B. 18
C. 11
D. 16
E. 5

32. In school A, there are only three classes 8th, 9th and 10th. If the respective ratio between the number of students (male + female) in class 8th and class 9th is 55 : 46. What is the number of student (male + female) in class 8th?
A. 56
B. 165
C. 110
D. 132
E. 99

33. In school B, the number of students (male + female) in classes other than class 10 is what % more than the number of students (male + female) in class 10?
A. 560
B. 550
C. 660
D. 650
E. 450

34. What is the respective ratio between the number of students (male + female) in class 10 of school C and total number of students (male + female) in all class together of school B?
A. 1 : 8
B. 1 : 9
C. 1 : 4
D. 1 : 6
E. 1 : 16

35. What is average number of students (male + female) in class 10 of schools A and B?
A. 56
B. 58
C. 55
D. 52
E. 54

###ANSWERS###

1. Ans. E.
48 + 15 = 63
63 - 11 = 52
52 + 15 = 67
67 - 11 = 56
56 + 15 = 71

2. Ans. E.
17 + (6 * 2) = 29
29 + (6 * 4) = 53
53 + (6 * 8) = 101
101 + (6 * 16) = 197
197 + (6 * 32) = 389

3. Ans. B.

15	24	52	117	243	460

9   28   65   126   217
2^3+1 3^3+1 4^3+1 5^3+1 6^3+1

4. Ans. A.

16	21	31	45	62	81

5   10   14   17   19
5   4   3   2

5. Ans. A.

6	11	27	86	349	1250

x1+5   x2+5   x3+5   x4+5   x5+5

6. Ans. A.

5	14	78	103	319	368

$9=3^2$ $64=4^3$ $25=5^2$ $216=6^3$ $49=7^2$

7. Ans. E.
Required ratio = (360+280) : (270+170)
= 640:440 = 16:11

8. Ans. A.
number of pillows sold by A & B together in May = 460
number of pillows sold by A & B together in August = 460+230 = 690

9. Ans. A.
number of pillows sold by A in March = 280 = 7 units(given)
So, 11 units = 440 = number of pillows sold by A in February
number of pillows sold by B in April = 390 = 13 units(given)
So, 9 units = 270 = number of pillows sold by B in February
Difference = 440-270 = 170

10. Ans. A.
Required % = (360-220)*100/220 = $63\frac{7}{11}$

11. Ans. E.
average number of pillows sold by B in March, April & June = (310+390+170)/3 = 290

12. Ans. D.
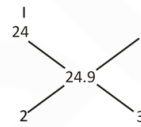number of pillows sold by A & B together in July = (280+240) = 520
number of pillows sold by A & B together in December = 520*(100-15)/100 = 442

13. Ans. B.
CP of mixture = $29.88 \times \frac{100}{120}$
= 24.9 Rs kg.
By Alligation,

I   II
24   x
      24.9
2   3

By solving. x = 25.5

14. Ans. D.
probability of choosing either 1 yellow or red ball = (7+5)/(8+7+5) = 12/20 =3/5

15. Ans. B.
Let capacity of tank = 120 units
capacity of A = 120/60 = 2 unit/hr
capacity of B = 120/40 = 3 unit/hr
capacity of C = 120/15 = 8 unit/hr
In 12 hrs., A & B will fill 12*(2+3) = 60 units
Tank will be emptied after 60/(2+3-8) = 20 hrs.

16. Ans. C.
Water = $96 \times \frac{40}{100}$ = 38.4 lit

Milk   Water
57.6   38.4 ⇔ 3 : 2
$-12 \times \frac{3}{5}$ =-7.2 $-12 \times \frac{2}{5}$ =-4.8
50.4   33.6
+10   +15
60.4   48.6

Required % = $\frac{48.6}{109} \times 100$ = 44.58 ≈ 45 %

17. Ans. B.
I. $3x^2+23x+42=0$

$3x^2+14x+9x+42=0$

$x(3x+14)+3(3x+14)=0$

$(x+3)(3x+14)=0$

$X=-3, -\frac{14}{3}$

II. $y^2-42y+437=0$

$y^2-19y-23y+437=0$

$y(y-19)-23(y-19)=0$

$(y-23)(y-19)-0$

$Y=23,19$

Hence, option B is correct.

18. Ans. E.

I. $x^2+6x-135=0$

$x^2-9x+15x-135=0$

$x(x-9)+15(x-9)=0$

$(x+15)(x-9)=0$

$X=-15, 9$

II. $y^2+10y-144=0$

$y^2+18y-8y-144=0$

$y(y+18)-8(y+18)=0$

$(y-8)(y+18)=0$

$Y=8,-18$

Hence, option E is correct.

19. Ans. D.

$x^2 = 144$

$x = 12, -12$

$Y^3 = 1728$

$Y = 12$

So, $X \le Y$

20. Ans. E.

$x^2 = 25$

$x = 5, -5$

$y^2 - 1 = 8$

$y^2 = 9$

$y = 3,-3$

No relation can be established

21. Ans. E.

$x^2 - 10x + 24 = 0$

$x^2 - 6x - 4x + 24 = 0$

$x = 6,4$

$y^2 - 12y + 35 = 0$

$y^2 - 5y - 7y+ 35 = 0$

$y = 5,7$

No relation can be established

22. Ans. D.

$2x^2 - 19x + 45=0$

$2x^2 - 10x -9x + 45=0$

$x = 4.5, 5$

$y^2 - 6y -5y + 30=0$

$y = 6, 5$

$X \le Y$

23. Ans. D.

number of shirts by D = 32% of 2800 = 896

number of casual shirts by D = 896 - 664 = 232

Required ratio = 664 : 232 = 83:29

24. Ans. E.

number of shirts sold by C in 2003 = 14% of 2800 = 392

Total number of shirts sold by C in 2003 & 2004 = 343*2 = 686

So, number of shirts sold by C in 2004 = 686-392 = 294

Required % = (392-294)*100 / 392 = 25%

25. Ans. E.

Required difference = (28-10)% of 2800 = 504

26. Ans. E.

100% = 360°

So, 32% = 115.2°

27. Ans. A.

Number of shirts sold by E in 2004 = 2800* 16/100 * 150/100 = 672

Number of shirts sold by E in 2005 = 672 * 75/100 = 504

28. Ans. D.

Let total amount Raj has = 100%

Wife will get 60%, out of these she spent 50%.

So, remaining amount = 1/2 × 60% = 30%

30% = 18000

So, 100% = 60000

29. Ans. A.

Present age of A = 5x+4

Present age of B = 3x+4

Present age of C = 5x+4 + 3x+4

5x+4 + 3x+4 + 5x+4 + 3x+4 = 80

or, x = 4

So, Present age of A = 5x+4 = 24

30. Ans. E.

Total number of female students in school C = 101 + 25 = 126

Required % = 126/360 * 100 = 35%

31. Ans. B.

male students in class 10 of school A = 48-12 = 36

male students in class 10 of school B = 64-10 = 54

Difference = 54-36 = 18

32. Ans. C.

number of students in class 10 = 48

number of students in class 8^{th,} 9th = 250-48 = 202

So, number of students in class 8th = 202*55/101 = 110

33. Ans. B.

In school B, the number of students (male + female) in classes other than class 10 = 480 - 64 =416

number of students (male + female) in class 10 = 64

Required % = (416-64)*100/64 = 550

34. Ans. D.

number of students (male + female) in class 10 of school C = 80

total number of students (male + female) in all class together of school B = 480

Ratio = 80:480 = 1:6

35. Ans. A.

average number of students (male + female) in class 10 of schools A and B = 48+64/2 =56