

Edu Skills

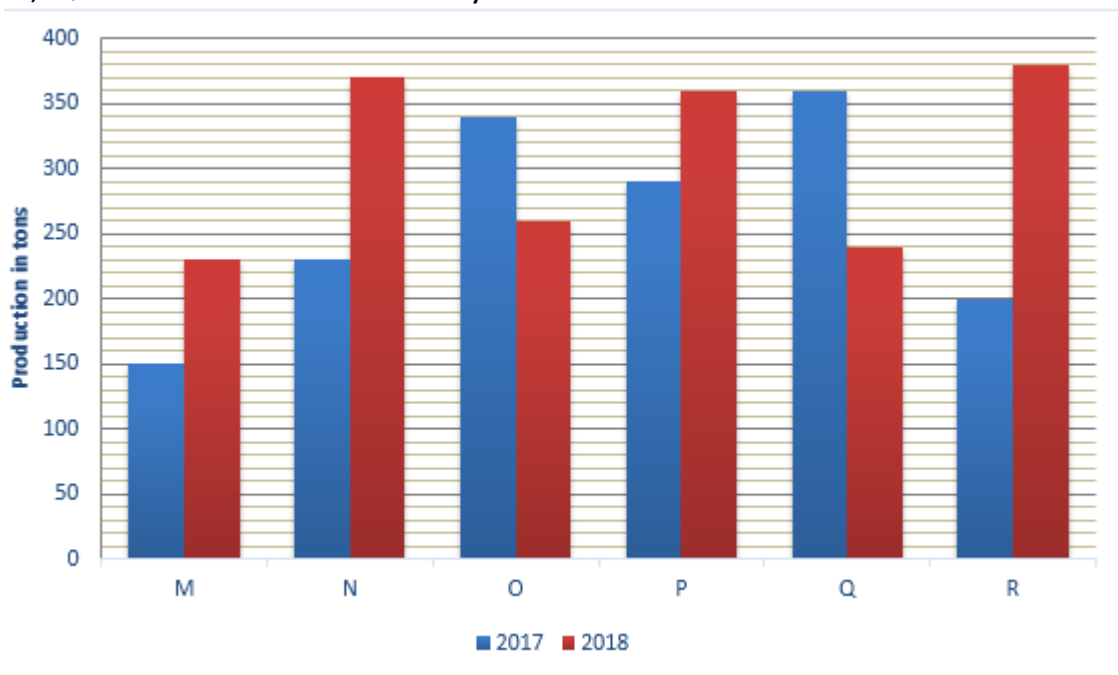
Achieve The Target

SBI Clerk Mains Quantitative Aptitude Quiz: 23rd July

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Directions (1-5): Study the following graphs and answer the given questions.

Given below is the bar graph showing the production of sugar by 6 firms. M, N, O, P, Q and R in two consecutive years 2017 and in 2018.



Q1. What is the difference between average production of sugar by firm N for both year and R for both year.

20

10

30

40

50

Solution:

$$\text{Difference} = \frac{(230 + 370)}{2} - \frac{(200 + 380)}{2} = 300 - 290 = 10$$

Q2. What is the average of sum of sugar production by firm M in 2017, firm Q in 2018 and firm P in 2018 ?

250

200

350

450

500

Solution:

$$\text{Required average} = \frac{150 + 240 + 360}{3} = \frac{750}{3} = 250$$

Q3. If production of sugar of firm P in 2019 increases by 20% in comparison to previous year and production of firm Q in 2019 increases by 25% in comparison to previous year then what is the sum of production of in 2019 for firm P and Q together?

690

580

394

732

632

Solution:

$$\text{Production of P in 2019} = 360 \times \frac{120}{100} = 432$$

$$\text{Production of Q in 2019} = 240 \times \frac{125}{100} = 300$$

$$\therefore \text{Total production of P and Q in 2019}$$

$$= 432 + 300$$

$$= 732$$

Q4. What is the ratio of production by firm M in 2017 and R in 2017 together to the production of firm Q in 2018 and P in 2018 together?

12 : 7

6 : 7

7 : 15

2 : 3

7 : 12

Solution:

$$\text{Required ratio} = \frac{150 + 200}{240 + 360} = \frac{350}{600} = 7 : 12$$

Q5. Production of sugar for firm N in both years is what % more or less than production of sugar for firm O in 2018 and firm Q in 2017 together.

(approximately)

7.33%

12.25%

8.45%

5.35%

3.22%

Solution:

Production of firm N in both years = 600

Production of firm O in 2018 and firm Q in 2017 = 620

$$\therefore \text{Required percentage} = \frac{620 - 600}{620} \times 100 = 3.22\%$$

Q6. A man has 7 relatives. 4 of them are ladies and 3 gentleman; his wife also has 7 relatives. 3 of them are ladies and rest gentleman. In how many ways can they invite 3 ladies and 3 gentleman for a dinner party so that there are 3 of the man's relatives and 3 of the wife's relatives?

450

498

499

485

489

Solution:

$$\begin{aligned} \text{Total no. of ways} &= ({}^4C_3 \times {}^4C_3) + ({}^4C_2 \times {}^3C_1 \times {}^3C_1 \times {}^4C_2) + ({}^4C_1 \times {}^3C_2 \times {}^3C_2 \times {}^4C_1) + \\ &({}^3C_3 \times {}^3C_3) \\ &= (4 \times 4) + (6 \times 3 \times 3 \times 6) + (4 \times 3 \times 3 \times 4) + 1 \times 1 \\ &= 16 + 324 + 144 + 1 = 485 \end{aligned}$$

Q7. A bag contains 3 red balls and 8 blacks ball and another bag contains 5 red balls and 7 blacks balls, one ball is drawn at random from either of the bag, find the probability that the ball is red.

93/264

95/264

91/264

97/264

97/273

Solution:

Probability of choosing either of the bags = $\frac{1}{2}$

$$\text{Required Probability} = \frac{1}{2} \times \frac{3}{11} + \frac{1}{2} \times \frac{5}{12}$$

$$= \frac{1}{2} \left(\frac{3}{11} + \frac{5}{12} \right)$$

$$= \frac{1}{2} \left(\frac{36+55}{132} \right)$$

$$= \frac{91}{264}$$

Q8. A bag contains 9 red and 7 white balls. Four balls are drawn out one by one and not replaced. What is the probability that they are alternatively of different colours?

9/65

6/65

9/130

8/130

None of these

Solution:

Balls can be drawn in following order :-

RWRW or WRWR

$$\Rightarrow \text{if red ball is drawn first, then probability} = \frac{9}{16} \times \frac{7}{15} \times \frac{8}{14} \times \frac{6}{13} \quad \text{--- (1)}$$

$$\Rightarrow \text{if white is drawn first, then probability} = \frac{7}{16} \times \frac{9}{15} \times \frac{6}{14} \times \frac{8}{13} \quad \text{--- (2)}$$

Required probability = (1) + (2)

$$= 2 \left(\frac{6 \times 7 \times 8 \times 9}{13 \times 14 \times 15 \times 16} \right) = \frac{3024}{21840} = \frac{9}{65}$$

Q9. A blind man lives in an apartment containing 2 rooms. Each day before going to work he enters any one room randomly, picks up a bag and leaves home. One of the rooms contains 3 blue, 4 green and 5 red bags and the other contains 2 blue, 1 green and 3 red bags. What is the probability that he takes a green bag to work ?

1/2

1/4

1/3

1/6

None of these

Solution:

Room 1	Room 2
3B, 4G, 5R	2B, 1G, 3R

$$P(\text{Green Bag to work}) = P\left(\begin{matrix} \text{Green bag} \\ \text{Room 1} \end{matrix}\right) \text{ or } P\left(\begin{matrix} \text{Green bag} \\ \text{Room 2} \end{matrix}\right)$$

$$= \frac{1}{2} \times \frac{4}{3+4+5} + \frac{1}{2} \times \frac{1}{2+1+3} = \frac{1}{4}$$

Q10. Find total numbers of arrangement can be formed using letters of word 'CARNIVOROUS'.

$$\frac{11!}{4}$$

$$\frac{11!}{4!}$$

$$\frac{11}{4}$$

$$\frac{11!}{2!}$$

$$\frac{11!}{2}$$

Solution:

$$\text{total no of arrangements} = \frac{11!}{2!2!}$$

$$= \frac{11!}{4}$$

Directions (11-15): What should come in the place of the question mark (?) in following number series problems?

Q11. 33, 39, 57, 87, 129, ?

183

177

189

199

214

Solution:

$$33 \xrightarrow{6} 39 \xrightarrow{18} 57 \xrightarrow{30} 87 \xrightarrow{42} 129 \xrightarrow{54} \boxed{183}$$

Q12. 19, 26, 40, 68, 124, ?

246

238

236

256

207

Solution:

$$19 \xrightarrow{7} 26 \xrightarrow{14} 40 \xrightarrow{28} 68 \xrightarrow{56} 124 \xrightarrow{112} \boxed{236}$$

Q13. 43, 69, 58, 84, 73, ?

62

98

109

63

99

Solution:

The pattern is +26, -11, +26, -11, +26, -11..

$$\therefore ? = 73 + 26 = 99$$

Q14. 2.5, 4, ?, 10, 14.5, 20, 26.5

8

7.5

6

5.5

6.5

Solution:

The pattern is +1.5, +2.5, +3.5, +4.5

Q15. 13, 20, 39, 78, 145, ?

234

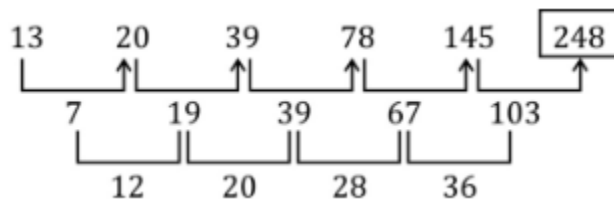
244

236

248

256

Solution:



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