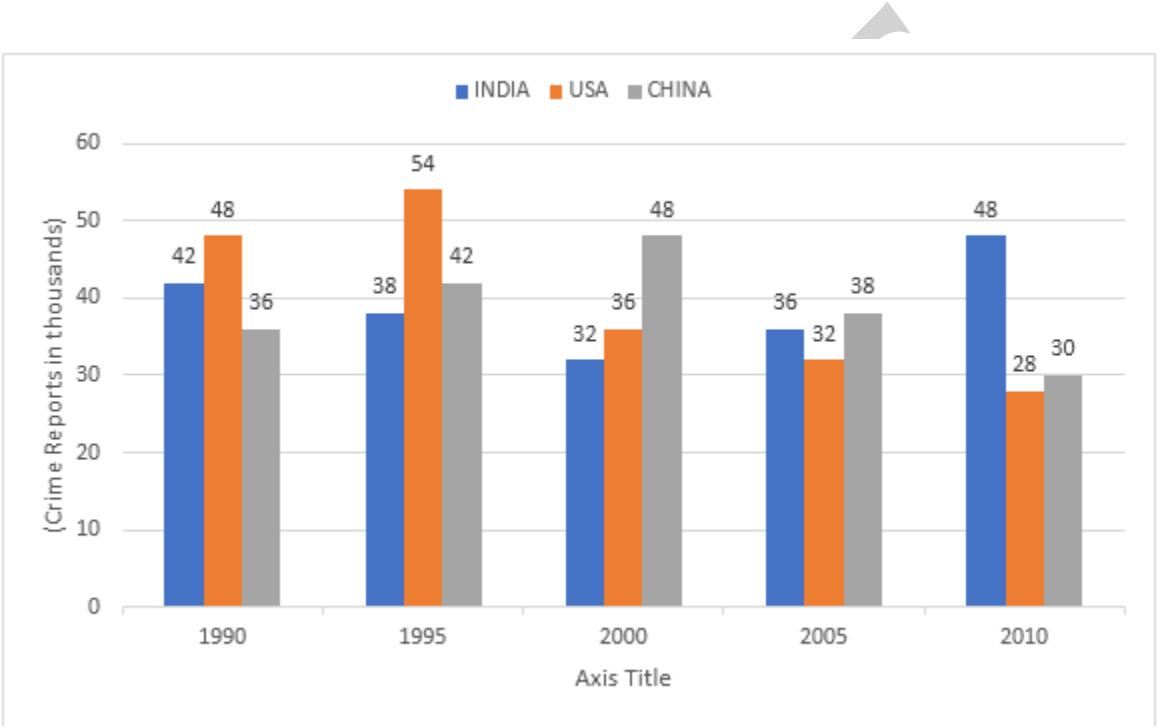
Pinnacle Learning Destination
Plot No.3 Third Floor Main Road
Raghunathpur, Sector 22 -Noida,
Uttar Pradesh
Pin-201301Ph-+91-9555662244

Quantitative Aptitude SBI PO Prelims 2018

Directions (1-5): The following bar graph shows the crime report (in thousands) of three countries during five different years. Study the graph carefully to answer the following questions.



Q1. Find the average crime report in India during all the five years.
(a) 39,200
(b) 38,200
(c) 32,900
(d) 36,200
(e) 42,200

Q2. In 1995 in USA, if 50/3% crimes were of robbery, 100/3% of smuggling, 45% of theft and rest of other crimes then find the report of other crimes in USA in the same year?
(a) 2300
(b) 2500
(c) 2400
(d) 2100
(e) 2700

Q3. Total crime reports in China in 2000 is how much percent more/less than the total crime reports in India in the same year?
(a) 50% less
(b) 50% more
(c) 60% more

(d) 65% less
(e) 55% more

Q4. If ratio of crime reports of robbery in China and USA in 2005 is 2 : 3 and ratio of crime reports of robbery, theft and smuggling in China in the same year is 5 : 8 : 6 then what is the total crime reports of robbery in USA in 2005(if in China only given crimes in the question happened)?
(a) 5,000
(b) 10,000
(c) 12,000
(d) 15,000
(e) 16,000

Q5. Total crime reports in India in 1990 and 2010 together is how much percent more or less than the total crime reports in china in 1995 and 2005 together?
(a) 21/2% less
(b) 25/2% more
(c) 25/2% less
(d) 21/2% more
(e) 17/2% more

Solutions (1-5):

S1. Ans.(a)

Sol. Required average $= \frac{1}{5} \times (42 + 38 + 32 + 36 + 48) \times 1000$

$= 39,200$

S2. Ans.(e)

Sol. Cases of robbery in USA $= \frac{50}{300} \times 54,000$

$= 9,000$

Cases of smuggling $= \frac{1}{3} \times 54000$

$= 18,000$

Cases of theft $= \frac{45}{100} \times 54,000$

$= 24,300$

$\therefore$ Cases of other crime $= 54,000 - (9,000 + 18,000 + 24,300)$

$= 2,700$

S3. Ans.(b)

Sol. Required percentage $= \frac{48-32}{32} \times 100$

$= 50\%$ more

S4. Ans.(d)

Sol. Total crime reports of robbery in China = $\frac{5}{19} \times 38{,}000$

$= 10{,}000$

$\therefore$ Total crime reports of robbery in USA = $\frac{3}{2} \times 10{,}000 = 15{,}000$

S5. Ans.(b)

Sol. Required percentage = $\frac{90-80}{80} \times 100$

$= 12\frac{1}{2}\%$ more

Q6. In an examination 80% of the boys passed in English and 85% passed in Mathematics, while 75% passed in both. If 45 boys failed in both, the number of boys who appeared for the examination was:
(a) 400
(b) 450
(c) 200
(d) 150
(e) 250

Q7. A person gave 20% of his income to his elder son, 30% of the remaining to the younger son and 10% of the remaining balance, he donated to a trust. He is left with Rs. 10080. His income was:
(a) Rs. 50,000
(b) Rs. 40,000
(c) RS. 30,000
(d) Rs. 20,000
(e) Rs. 24,000

Q8. A and B invest Rs. 3000 and Rs. 4000, respectively in a business. A receives Rs. 10 per month out of the profit as a remuneration for running the business and the rest of the profit in divided is proportion to their investments. If in a year, A totally receives Rs. 390, what does B receive?
(a) Rs. 630
(b) Rs. 360
(c) Rs. 480
(d) Rs. 380
(e) Rs. 420

Q9. The monthly incomes of two persons are in the ratio 2 : 3 and their monthly expenses are in the ratio 5 : 9. If each of them saves Rs. 600 per month, then their monthly incomes are:
(a) Rs. 1500; Rs. 2250
(b) Rs. 1800; Rs. 2400
(c) Rs. 1600; Rs. 2400
(d) Rs. 1400; Rs. 2100
(e) Rs. 1200; Rs. 1800

Q10. Rs. 33,630 are divided among A, B and C in such a manner that the ratio of the amount of A to that of B is 3: 7 and the ratio of the amount of B to that of C is 6: 5. The amount of money received by B is
(a) Rs. 14868
(b) Rs. 16257
(c) Rs. 13290

(d) Rs. 12390
(e) Rs. 10390

Solutions (6-10):

S6. Ans.(b)
Sol. Passed boys in English or Math or both
= 80 + 85 – 75
= 90%
failed boys in both subject = 10%
∴ Total number of boys
$= \frac{100}{10} \times 45$
= 450

S7. Ans.(d)
Sol.
Let the total income be Rs. x
$x \times \frac{80}{100} \times \frac{70}{100} \times \frac{90}{100} = 10080$
x = Rs. 20,000

S8. Ans.(b)
Sol. As, A receives Rs. 10 per month out of profit.
Therefore, A gets 12 × 10 = Rs. 120
Here, A totally receives Rs. 390.
Therefore 390 – 120 = Rs. 270 was paid for A's capital
Ratio of profit = 3: 4
Profit of B $= \frac{270}{3} \times 4 = 360$

S9. Ans.(c)

Sol.

Let monthly income be 2x and 3x

And monthly expense be 5y and 9y

$2x - 5y = 600$ ...(i)

$3x - 9y = 600$ ...(ii)

$2x - 5y = 3x - 9y$

$x = 4y$

Put this in equation (i)

$8y - 5y = 600$

$3y = 600 = y = 200 \Rightarrow x = 800$

A's income = 1600

B's income = 2400

S10. Ans.(a)

Sol. A: B = 3: 7

B: C = 6: 5

A: B: C = 3 × 6: 7 × 6: 7 × 5

= 18: 42: 35

Sum of the ratios = 18 + 42 + 35 = 95

$\therefore$ B's share = Rs. $\left(\frac{42}{95} \times 33630\right)$ = Rs. 14868

Pinnacle Learning Destination
Plot No.3 Third Floor Main Road
Raghunathpur, Sector 22 -Noida,
Uttar Pradesh
Pin-201301Ph-+91-9555662244

Directions (11-15): In the following questions two equations numbered I and II are given. You have to solve both the equations and —
Give answer (a) if $x > y$
Give answer (b) if $x \geq y$
Give answer (c) if $x < y$
Give answer (d) if $x \leq y$
Give answer (e) if $x = y$ or the relationship cannot be established

Q11. I. $4x^2 + 20x + 21 = 0$
II. $2y^2 + 17y + 35 = 0$

Q12. I. $x^2 - 14x + 48 = 0$
II. $y^2 + 6 = 5y$

Q13. I. $38x^2 - 3x - 11 = 0$
II. $28y^2 + 32y + 9 = 0$

Q14. I. $9x^2 - 27x + 8 = 0$
II. $4y^2 - 13y + 3 = 0$

Q15. I. $x^2 - 28x + 196 = 0$
II. $y^2 = 196$

Solutions (11-15):

S11. Ans.(b)

Sol.

I. $4x^2 + 20x + 21 = 0$

$\Rightarrow 4x^2 + 6x + 14x + 21 = 0$

$\Rightarrow (2x + 3)(2x + 7) = 0$

$\Rightarrow x = \frac{-3}{2}, \frac{-7}{2}$

II. $2y^2 + 17y + 35 = 0$

$\Rightarrow 2y^2 + 10y + 7y + 35 = 0$

$\Rightarrow (y + 5)(2y + 7) = 0$

$\Rightarrow y = -5, \frac{-7}{2}$

$\Rightarrow x \geq y$

S12. Ans.(a)

Sol.

I. $x^2 - 14x + 48 = 0$

$\Rightarrow x^2 - 8x - 6x + 48 = 0$

$\Rightarrow (x - 6)(x - 8) = 0$

$\Rightarrow x = 6, 8$

II. $y^2 - 5y + 6 = 0$

$\Rightarrow y^2 - 2y - 3y + 6 = 0$

$\Rightarrow (y - 2)(y - 3) = 0$

$\Rightarrow y = 2, 3$

$\Rightarrow x > y$

S13. Ans.(b)

Sol.

I. $38x^2 - 3x - 11 = 0$

$\Rightarrow 38x^2 - 22x + 19x - 11 = 0$

$\Rightarrow (19x - 11)(2x + 1) = 0$

$\Rightarrow x = \frac{11}{19}, -\frac{1}{2}$

II. $28y^2 + 32y + 9 = 0$

$\Rightarrow 28y^2 + 14y + 18y + 9 = 0$

$\Rightarrow (2y + 1)(14y + 9) = 0$

$\Rightarrow y = \frac{-9}{14}, \frac{-1}{2}$

$\Rightarrow x \geq y$

S14. Ans.(e)

Sol.

I. $9x^2 - 27x + 8 = 0$

$\Rightarrow 9x^2 - 3x - 24x + 8 = 0$

$\Rightarrow (3x - 1)(3x - 8) = 0$

$\Rightarrow x = \frac{1}{3}, \frac{8}{3}$

II. $4y^2 - 13y + 3 = 0$

$\Rightarrow 4y^2 - 12y - y + 3 = 0$

$\Rightarrow (y - 3)(4y - 1) = 0$

$\Rightarrow y = \frac{1}{4}, 3$

$\Rightarrow$ No relation between x and y

S15. Ans.(b)

Sol.

I. $x^2 - 28x + 196 = 0$

$\Rightarrow (x - 14)(x - 14) = 0$

$\Rightarrow x = 14, 14,$

II. $y^2 = 196$

$\Rightarrow y = 14, -14$

$\Rightarrow x \geq y$