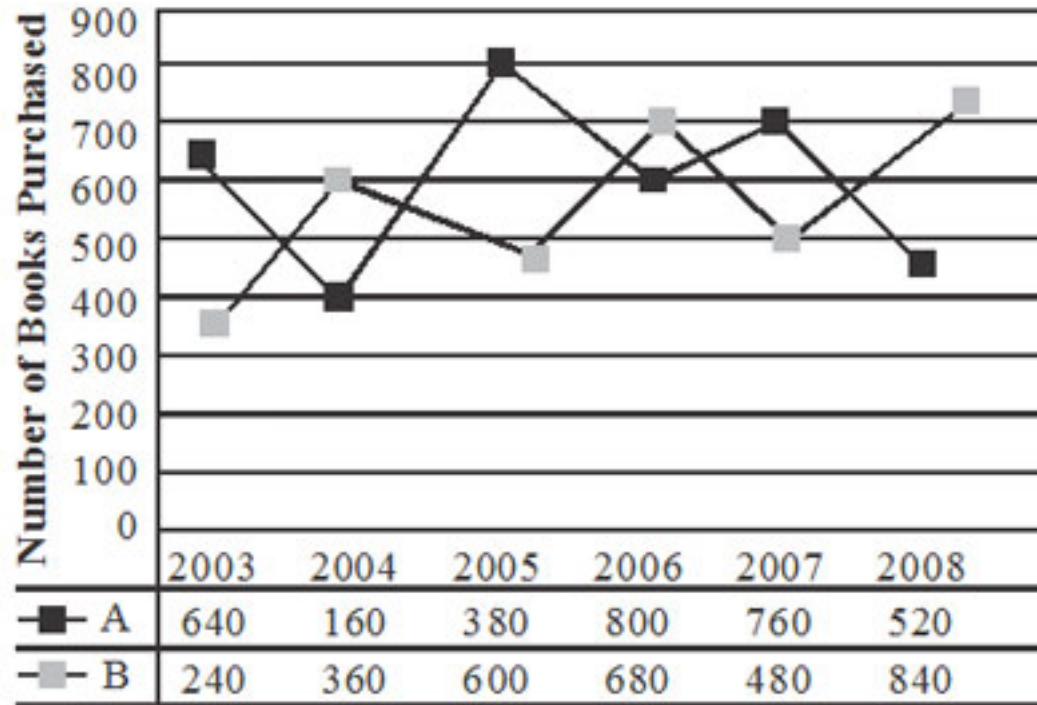


:: Quantitative Aptitude ::

Directions (31-35): Refer to the graph and answer the given questions.

Data Related to Number of Books Purchased for Two Libraries (A and B) during 6 years



31. What is the respective ratio between total number of books purchased for libraries A and B together in 2003 and total number of books purchased for the same libraries together in 2007?

- (a) 22 : 31
- (b) 22 : 31
- (c) 11 : 17
- (d) 11 : 19
- (e) 22 : 35

32. What is the average number of books purchased for library A during 2004, 2005, 2007 and 2008?

- (a) 465
- (b) 455
- (c) 460
- (d) 445
- (e) 450

33. Out of the total number of books purchased by libraries A and B together in 2008, only 20% are graphic novels. What is the total number of graphic novels purchased for libraries A and B together in 2008?

- (a) 324
- (b) 312
- (c) 272
- (d) 336
- (e) 288

34. Number of books purchased for library B increased by what percent from 2003 to 2006?

- (a) $175\frac{1}{3}\%$ (b) $172\frac{1}{3}\%$ (c) $196\frac{2}{3}\%$
- (d) $183\frac{1}{2}\%$ (e) $194\frac{2}{3}\%$

35. Number of books purchased for library B is what percent of the number of books purchased for library A in 2006?

- (a) 30%
- (b) 35%
- (c) 55%

(d) 85%

(e) 45%

Directions (36-40): In the following questions, two equations numbered I and II have been given. You have to solve both the equation and mark the correct answer.

Give answer

a. if $x < y$

b. if $x > y$

c. if $x \geq y$

d. if $x \leq y$

e. if relationship between x and y cannot be established

36. I. $2x^2 + 23x + 63 = 0$

II. $4y^2 + 19y + 21 = 0$

37. I. $3x^2 + 29x + 56 = 0$

II. $2y^2 + 15y + 25 = 0$

38. I. $3x^2 + 23x + 44 = 0$

II. $3y^2 + 20y + 33 = 0$

39. I. $4x^2 + 29x + 45 = 0$

II. $3y^2 + 19y + 28 = 0$

40. I. $2x^2 + 13x + 21 = 0$

II. $5y^2 + 22y + 21 = 0$

41. A, B and C start a small business. A contributes one-fifth of the total capital invested in the business. B contributes as much as A and C together. Total profit at the end of the year was Rs. 5200. What was C's profit share?

- (a) Rs. 1510
- (b) Rs. 2510
- (c) Rs. 1500
- (d) Rs. 2560
- (e) Rs. 1560

Directions (42-46): What will come in place of question mark (?) in the given number series?

42. 17 19 25 37 ? 87

- (a) 63
- (b) 52
- (c) 55
- (d) 67
- (e) 57

43. 61 82 124 187 ? 376

- (a) 271
- (b) 263
- (c) 257
- (d) 287
- (e) 249

44. 23 30 46 80 141 ?

- (a) 144
- (b) 112
- (c) 136
- (d) 220
- (e) 238

45. 179 180 172 199 135 ?

- (a) 236
- (b) 272
- (c) 240
- (d) 256
- (e) 260

46. 14 6 5 6.5 12 ?

- (a) 29
- (b) 27
- (c) 23
- (d) 33
- (e) 35

47. A project manager hired 16 men to complete a project in 38 days. However, after 30 days, he realised that only $\frac{1}{4}$ of the work is complete. How many more men does he need to hire to complete the project on time?

- (a) 48
- (b) 24
- (c) 32

(d) 16

(e) 36

48. A took a certain sum as loan from bank at a rate of 8% simple interest per annum. A lends the same amount to B at 12% simple interest per annum. If at the end of five years, A made profit of Rs. 800 from the deal, how much was the original sum?

(a) Rs. 6500

(b) Rs. 4000

(c) Rs. 6200

(d) Rs. 6000

(e) Rs. 4500

49. A wholesaler blends two varieties of tea, one costing Rs. 60 per kg and another costing Rs. 105 per kg. The respective ratio of quantities they were mixed in was 7 : 2. If he sold the mixed variety at Rs. 100 per kg. how much was his profit percentage?

(a) $34\frac{2}{7}$

(b) $38\frac{2}{5}\%$

(c) $32\frac{2}{5}\%$

(d) $42\frac{6}{7}\%$

(e) $48\frac{6}{7}\%$

50. Joe's present age is $\frac{2}{7}$ th of his father's present age. Joe's brother is 3 years older to Joe. The respective ratio between present age of Joe's father and Joe's brother is 14 : 5. What is Joe's present age?

- (a) 6 yr
- (b) 15 yr
- (c) 12 yr
- (d) 18 yr
- (e) 20 yr

51. In a 90 L mixture of milk and water, percentage of water is only 30%. The milkman gave 18 L of this mixture to a customer and then added 19 L of water to the remaining mixture. What is the percentage of milk in the final mixture?

- (a) 64%
- (b) 48%
- (c) 52%
- (d) 68%
- (e) 56%

52. A bag contains 4 red balls, 6 green balls and 5 blue balls. If three balls are picked at random, what is the probability that two of them are green and one of them is blue in colour?

- (a) $\frac{20}{21}$
- (b) $\frac{10}{91}$
- (c) $\frac{15}{91}$
- (d) $\frac{5}{91}$
- (e) $\frac{25}{91}$

53. A rectangular plot of 55 m long and 45 m broad, has two concrete crossroads (of equal width) running in the middle of it. One parallel to the length and the other parallel to the breadth. The rest of the plot is used as a lawn. If the area of the lawn is 1911m², what is the width of each of the crossroads?

- (a) 5 m
- (b) 5.5 m

- (c) 6 m
- (d) 4 m
- (e) 4.5 m

54. Two stations, A and B are 827 km apart from each other. One train starts from station A at 5 am and travel towards station B at 62 km/h. Another train starts from Station B at 7 am and travel towards station A at 59 km/h. At what time will they meet?

- (a) 1 : 00 pm
- (b) 11 : 45 am
- (c) 12 : 48 : 35 pm
- (d) 11 : 20 am
- (e) 1 : 37 : 45 pm

55. Abha gave 30% of his money to Vijay. Vijay gave $\frac{2}{3}$ rd of what he receive to this mother Vijay's mother gave $\frac{5}{8}$ th of the money she receive from Vijay, to the grocer. Vijay's mother is now left with Rs. 600. How much money did Abhay have intially?

- (a) Rs. 6200
- (b) Rs. 8000
- (c) Rs. 6000
- (d) Rs. 8200
- (e) Rs. 10200

Directions (56-60): Study the table to answer the given questions?

Data Regarding number of chandidates appearing for civil services (CS) and engineering services (ES) examinations in the yers 2007, 2008, 2009, 2010 in the country XYZ

| Year | Total Number of candidates Appeared | Civil Services Graduation out of the total Candidates Appeared (in %*) | Total Number of Candidates Appeared | Engineering Services Graduates out of the total candidates Appeared (in %) |
|------|-------------------------------------|--|-------------------------------------|--|
| 2007 | 58 | 75 | 30 | 52 |
| 2008 | 60 | 60 | 36 | 50 |
| 2009 | 70 | 65 | 52 | 40 |
| 2010 | 76 | 50 | 40 | 60 |

(Note: Figures with regard to total number of candidates appeared are given in thousands)

56. Total number of candidates who appeared for CS and ES together in 2011 was 25% more than the total number of candidates who appeared for the same together in 2010. How many female candidates appeared for both the exams together in 2011 if they formed $\frac{1}{4}$ of the total number of candidates appearing for both CS and ES that year?

- (a) 52000
- (b) 58000
- (c) 60000
- (d) 62000
- (e) 64000

57. What is the respective ratio between the number of graduates who had appeared for ES in 2010 and the number of graduates who appeared for CS in 2010?

- (a) 13 : 21
- (b) 12 : 17

- (c) 12 : 19
- (d) 11 : 17
- (e) 11 : 19

58. Total number of graduates who appeared for ES in 2008 in what percent of the total number of graduates who appeared for CS in the same year?

- (a) 75%
- (b) 40%
- (c) 55%
- (d) 60%
- (e) 50%

59. What is the difference between the average number of candidates who appeared for CS in the year 2007 and 2008 and average number of candidates who appeared for ES in the same years together?

- (a) 38400
- (b) 24400
- (c) 23000
- (d) 26400
- (e) 24000

60. What is the total number of graduates who appeared for both CS and ES together in the year 2009?

- (a) 66300
- (b) 64200
- (c) 60800
- (d) 62800
- (e) 66800

Directions (61-65): What approximate value will come in place of the question mark (?) in the given questions?

61. $1439 \div 16 \times 14.99 + \sqrt{(228)} = ?$

- (a) 1315 (b) 1365
(c) 1215 (d) 1465
(e) 1265

62. $(11.92)^2 + (16.01)^2 = ? \times (3.85)^2$

- (a) 15
(b) 2
(c) 4
(d) 5
(e) 12

63. $(19.97\% \text{ of } 781) + ? + (30\% \text{ of } 87) = 252$

- (a) 40
(b) 50
(c) 25
(d) 70
(e) 80

64. $82.11 - 21 \times 2.99 + ? = 240$

- (a) 105
(b) 173
(c) 123
(d) 234
(e) 221

65. $399.15 - 12 \times 13.95 + ? = (27.02)^2$

- (a) 285
- (b) 225
- (c) 345
- (d) 150
- (e) 185