RBI GRADE B SET-03- QUANT

Directions (61-65): Study the following information carefully and answer the questions that follow:
The ratio of girls to boys in a class is 7:8, respectively. All the students study 3 different languages, Hindi, English and Marathi. 30% of the boys study only English.
400 girls study only English and Hindi i.e. $\frac{2}{7}$th of the total number of girls. One-eighth of the boys study only English and Marathi. Number of girls studying only English is 85% of the boys studying the same. Two fifth of the boys study only Hindi and Marathi. The number of boys studying only English and Hindi is 10% of the girls studying the same. The remaining boys study only Hindi . 40% of the girls study only Hindi. The remaining girls study only Hindi and Marathi.

61. The number of girls studying only Hindi and Marathi is what percent of number of boys studying only Hindi?
(a) $13\frac{1}{3}\%$ (b) $13\frac{2}{3}\%$ (c) $16\frac{2}{3}\%$ (d) 17 (e) None of these

62. The number of boys studying only Marathi and English is what times of the number girls studying only Hindi.
(a) 0.26 (b) 0.31 (c) 0.36 (d) 0.41 (e) 0.45

63. What is the respective ratio of girls studying only English to boys studying only English and Hindi?
(a) 5:43 (b) 45:7 (c) 51:7 (d) 54:11 (e) None of these

64. Find the difference between girls studying English in all and the boys studying English in all.
(a)68 (b) 88 (c) 95 (d) 98 (e) None of these

65. The number of boys studying only Marathi is what percent of the number of girls studying only English?
(a) 15 % (b) 25 % (c) 35 % (d) 45 % (e) None of these

Directions (66-70): The following table provides information about the number of students applied for CGL examination from 5 different states in different 4 years. Study the table carefully and answer the following questions.

Years	UP	Haryana	Delhi	Bihar	Gujrat
2005	650	760	820	800	780
2006	700	740	860	780	740
2007	800	820	940	750	730
2008	750	880	920	840	790
2009	850	840	900	860	770

66. Find the difference of average number of students applied for CGL exam from 2005 to 2007 from Delhi and the average number of students applied for CGL exam from 2007 to 2009 from Gujrat.
(a) 990 (b) 330 (c) 110 (d) 90 (e) None of these

67. Number of students in 2009 from Haryana forms what percent of total number of students applied from Haryana in all years together?
(a) 19.8% (b) 20.8% (c) 21.8% (d) 22.8% (e) 23.8

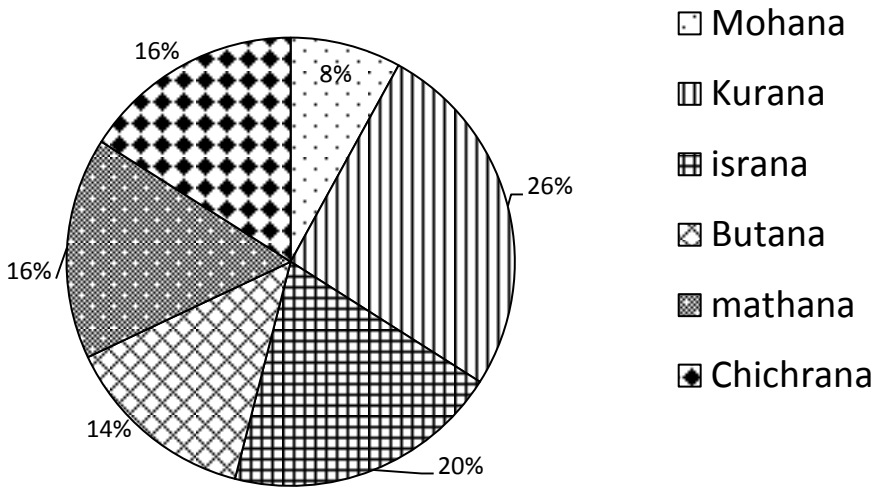
68. Find the percentage increase in total number of students applied in 2009 as compared to previous years.
(a) 0.85% (b) 0.95% (c) 1.75% (d) 1.85% (e) 1.95%

69. If 36% of students qualified from UP in the CGL exam over the years and afterwards $\frac{5}{27}$ of them passed the interview and got the job. Then first the total number of students from over these years who got the job.
(a) 350 (b) 275 (c) 225 (d) 245 (e) None of these

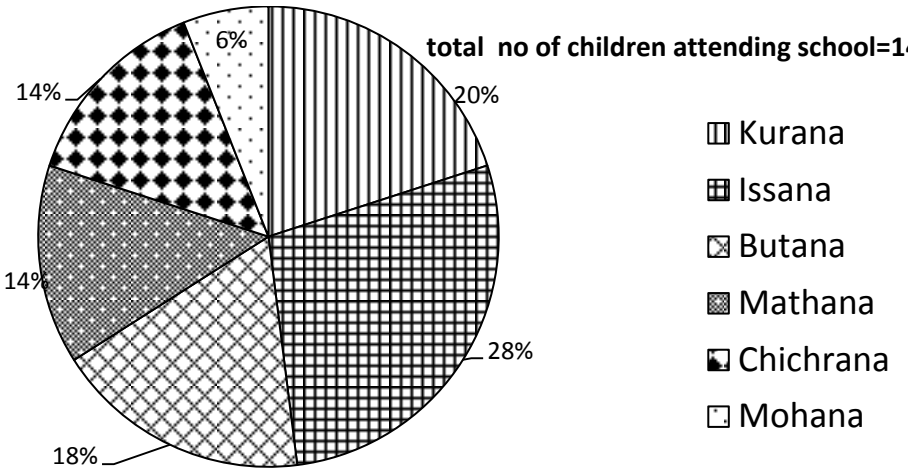
70. If 20% of the total students applied in all five years together from Gujrat passed the interview but $\frac{1}{6}$th of them were disqualified due to several reasons, then the number of disqualified candidates from gujrat in all five years is what percent of total number of students applied from UP from 2007 to 2009?
(a) $5\frac{7}{24}\%$ (b) $5\frac{11}{24}\%$ (c) $7\frac{1}{11}\%$ (d) $9\frac{1}{11}\%$ (e) None of these

Questions (71-75): The following pie charts show the percentage breakup of number of children in 6 different villages and number of children from these villages attending the school. Study the pie charts carefully and answer the following questions:

total no. of children=2050



total no of children attending school=1450



71. What is the respective ratio of the number of children of village kurana who are not attending the school to the number of children of village israna who are attending the school?
(a) 215:406 (b) 215:407 (c) 203:713 (d) 191:413 (e) None of these

72. Total number of children attending school from village mathana and mohana together forms what percentage of total number of children from these two villages. (round off to 2 decimal places)
(a) 58.94% (b) 53.24 % (c) 54.74 % (d) 51.24% (e) 61.54%

73. The number of children from village chichrana who are not attending school is how much more or less than the number of children of village Butana who are not attending the village?
(a) 101 (b) 99 (c) 103 (d) 111 (e) None of these

74. The total number children who are not attending the school from all villages together except mathana forms what percent of total number of children from all village together?
(a) 23.44% (b) 23.17% (c) 25.44% (d) 26.44% (e) 27.44%

75. If $37\frac{1}{2}\%$ of the total number of childrens from mathana are from BPL families and $\frac{7}{29}$ of the childrens of mathana who are attending school are from BPL families. Then the number of childrens from mathana who are from BPL families and are not attending school forms what percent of total number of childrens in mathana? (round off to 2 decimal places.)
(a) 22.56% (b) 22.66% (c) 22.76% (d) 22.86% (e) 22.96%

76. The average of 8 numbers is 20. The average of first two numbers is $15\frac{1}{2}$ and that of the next three is $21\frac{1}{3}$. The sixth number is less than the 7^{th} and 8^{th} number by 4 and 7 respectively, then find the 8^{th} number.
(a) 17 (b) 25 (c) 19 (d) 20 (e) None of these

77. The ratio of number of boys to that of girls in a group becomes 2:1, when 15 girls leave. But afterwards when 45 boys also leave, this ratio becomes 1:5. Originally the number of girls in the group was:
(a)40 (b) 42 (c) 45 (d) 48 (e) None of these

78. An ore contains 25% of an alloy that has 90% iron. Other than this, in the remaining 75% of the ore, there is no iron. What is the quantity of ore (in kg) needed to obtain 60 kg of pure iron?
(a) $266\frac{1}{3}$ kg (b) $266\frac{2}{3}$ kg (c) 267 kg (d) $267\frac{1}{3}$ kg (e) None of these

79. A shopkeeper buys 144 items at 90 paise each. But later he realized that $13\frac{8}{9}$% of the total items are defected and could not be sold. He sells the remaining at Rs. 1.2 each. What is his overall gain percentage?
(a) $14\frac{22}{27}$% (b) $14\frac{20}{27}$% (c) 15% (d) $15\frac{4}{9}$% (e) None of these

80. A trader marked his goods at 20% above the cost price. He sold half of the stock at marked price. One quarter at a discount of 20% on marked price and rest at a discount of 40% on marked price, then his gain is
(a) 2.5 % (b) 2.2 % (c) 2 % (d) 1.9 % (e) None of these

81. A person invests money in 3 different schemes for 6 years 10 years and 12 years at 10%, 12% and 15% simple interest respectively. At the completion of each scheme, he gets the same interest. The ratio of his investments is
(a) 2:3:6 (b) 2:5:6 (c) 6:5:2 (d) 6:5:3 (e) None of these

82. A man gave 50% of his savings of Rs. 84100 to his wife and divided the remaining sum among his sons Aman and Bimal of 15 and 13 years of age respectively. He divided it in such away that each of his sons when they attain the age of 18 years, would receive the same amount of 5% compound interest per annum. The share of Bimal was:
(a) Rs. 22050 (b) Rs. 20000 (c) Rs. 25000 (d) Rs. 25500 (e) None of these

83. Sanjay does $\frac{7}{10}$ of the work in 15 days. After that he completes the remaining work in 4 days with the help of sandeep. In how many days sandeep can complete the whole work alone?
(a)$35\frac{5}{17}$ days (b) $35\frac{3}{17}$ days (c) $35\frac{4}{17}$ days (d) 35 days (e) none of these

84. Two guns are fired from the same place at an interval of 6 minutes. A person approaching the place observes that 5 minutes 52 seconds have elapsed between the hearing of the sound of the 2 guns. If the velocity of the sound is 330 m/sec, the speed (in km/h) of the man is:
(a) 18 km/h (b) 27 km/h (c) 36 km/h (d) 45 km/h (e) none of these

85. The length of each side of a rhombus is equal to the length of the side of square whose diagonal is $40\sqrt{2}$ cm. If the length of the diagonals of rhombus are in ratio 3:4, then its area (in cm^2) is:
(a) 1536 cm^2 (b) 1515 cm^2 (c) 1554 cm^2 (d) 1600 cm^2 (e) None of these

Directions (86-90): Find the wrong number in the series:

86. 1524 1541 1576 1626 1694
(a) 1524 (b) 1541 (c) 1576 (d) 1626 (e) 1694

87. 169 184 139 216 109
(a) 169 (b) 184 (c) 139 (d) 216 (e) 109

88. 32 18 10.8 6.48 3.888
(a) 32 (b) 18 (c) 10.8 (d) 6.48 (e) 3.888

89. 54 58 117 354 1419 7098
(a) 54 (b) 58 (c) 117 (d) 1419 (e) 7098

90. 0 4 18 54 100 180
(a) 0 (b) 18 (c) 54 (d) 4 (e) 100

Q. 61-65

	Girls (1400)	Boys (1600)
English	408	480
English and Hindi	400	40
English and Marathi	-	200
Hindi and Marathi	32	640
Hindi	560	240

61. (a); $\frac{32}{240} \times 100 = 13\frac{1}{3}\%$

62. (c); $\frac{200}{560} = 0.36$

63. (e); $\frac{408}{40} = 51:5$

64. (b); required difference = 808 – 720 = 88

65. (e); required percentage = $\frac{(0)}{408} \times 100 = 0\%$

66. (c); $\frac{820 + 860 + 940}{3} - \frac{730 + 790 + 770}{3} = 110$

67. (b); $\frac{840}{4040} \times 100 = 20.8\ \%$

68. (b); $\frac{40}{4180} \times 100 \approx 0.95\%$

69. (e); $\frac{5}{27} \times \frac{36}{100} \times 3750 = 250$

70. (a); Passed students who were disqualified= $\frac{1}{6} \times \frac{20}{100} \times 3810 = 127$

Required percentage = $\frac{127}{2400} \times 100 = 5\frac{7}{24}\%$

71. (e); required ratio = $\frac{533-290}{406}$ = 243:406

72. (a); required % = $\frac{290}{492} \times 100 = 58.94\%$

73. (b); Required difference = 125 – 26 = 99

74. (b); $\frac{(475)}{2050} \times 100 = 23.17\%$

75. (a); total no. of children from mathana = 328

Children from BPL families = $\frac{37.5}{100} \times 328 = 123$

BPL family children who are attending school = $\frac{7}{29} \times 203 = 49$

BPL family children who are not attending school = 123 – 49 = 74

Required percentage = 22.56%

76. (b); Sum of 8 numbers = 20 × 8 = 160

Sum of first two numbers = 15.5 × 2 = 31

Sum of next three numbers = $\frac{64}{3} \times 3 = 64$

Sum of last 3 numbers = 160 – (31 + 64) = 65

x + x + 4 + x + 7 = 65

x = 18, x + 7 = 25

77. (a); Let the number of boys = b

Number of girls = g

$\frac{b}{g-15} = \frac{2}{1}, b - 2g = -30$

also $\frac{b-45}{g-15} = \frac{1}{5}$, 5b – g = 210

b = 50, g = 40

78. (b); iron in 1 kg ore = $1 \times \frac{25}{100} \times \frac{90}{100}$ kg

$\left(\frac{100}{25} \times \frac{100}{90}\right)$ kg ore = 1 kg iron

$\left(4 \times \frac{10}{9} \times 60\right)$ kg ore = 60 kg iron = $266\frac{2}{3}$ kg ore

79. (a); Total CP = 0.9 × 144 = Rs. 129.6

Total SP = $\left(100 - \frac{125}{9}\right) \times \frac{1}{100} \times 144 \times 1.2 = Rs.148.8$

Gain percentage = $\frac{(148.8-129.6)}{129.6} \times 100 = 14\frac{22}{27}\%$

80. (c); Let total number of goods = 100

With CP of each good = Rs. 1

Total CP = Rs. 100

SP for half of the goods = $\frac{120}{100} \times 50 = \text{Rs. } 60$

SP for $\frac{1}{4}$th of the goods = $\frac{80}{100} \times \frac{120}{100} \times 25 = \text{Rs. } 24$

SP for $\frac{1}{4}$th of the goods = $\frac{60}{100} \times \frac{120}{100} \times 25 = \text{Rs. } 18$

Total SP = Rs. 102

Percent profit = $\frac{2}{100} \times 100 = 2\%$.

81. (e); (6×10%)of A = (10 × 12%) of B = (12 × 15%) of C

(A, B, C are the investments)

0.6 A = 1.2 B = 1.8 C

A:B:C: = 6:3:2

82. (b); total share of Aman and Bimal = 42050

Let share of Aman = x

Share of Bimal = 42050 – x

$x \times \left(1 + \frac{5}{100}\right)^3 = (42050 - x)\left(1 + \frac{5}{100}\right)^5$

x = 22050
Share of Bimal = 42050 – 22050 = Rs. 20000

83. (a); per day work of sanjay = $\frac{7}{150}$
Per day work of sanjay and sandeep = $\frac{3}{40}$
Per day work of sandeep = $\frac{3}{10} - \frac{7}{150} = \frac{17}{600}$
Number of days taken by sandeep to complete the work = $\frac{600}{17} = 35\frac{5}{17}$ days

84. (b); Distance covered by sound in 8 seconds
= distance covered by man in 352 seconds
$\frac{330 \times 8}{352}$ = speed of man = $7.5 \times \frac{18}{5}$ = 27 km/h

85. (a); Length of each side of rhombus = 40 cm
Let the diagonals = 3x, 4x
$\left(\frac{3x}{2}\right)^2 + \left(\frac{4x}{2}\right)^2 = 1600$
$x^2 = 1600 \times \frac{4}{25} = 256$, x = 16
area of rhombus = $\frac{1}{2} \times 48 \times 64 = 1536$ cm^2

86. (c); 1524 + 17 × 1 = 1541
1541 + 17 × 2 = 1575, not 1576
1575 + 17 × 3 = 1626
1626 + 17 × 4 = 1694

87. (d); 169 + 15 × 1 = 184
184 – 15 × 3 = 139
139 + 15 × 5 = 214, not 216
214 – 15 × 7 = 109

88. (a); 30 × 0.6 = 18, not 32 × 0.6
18×0.6 = 10.8
10.8× 0.6 = 6.48
6.48× 0.6 = 3.888

89. (b); 54 × 1 + 3 = 57, not 58
57 × 2 + 3 = 117
117 × 3 + 3 = 354
354 × 4 + 3 = 1419
1419 × 5 + 3 = 7098

90. (c); $1^3 - 1^2 = 0$
$2^3 - 2^2 = 4$
$3^3 - 3^2 = 18$
$4^3 - 4^2 = 48$, not 54
$5^3 - 5^2 = 100$
$6^3 - 6^2 = 180$