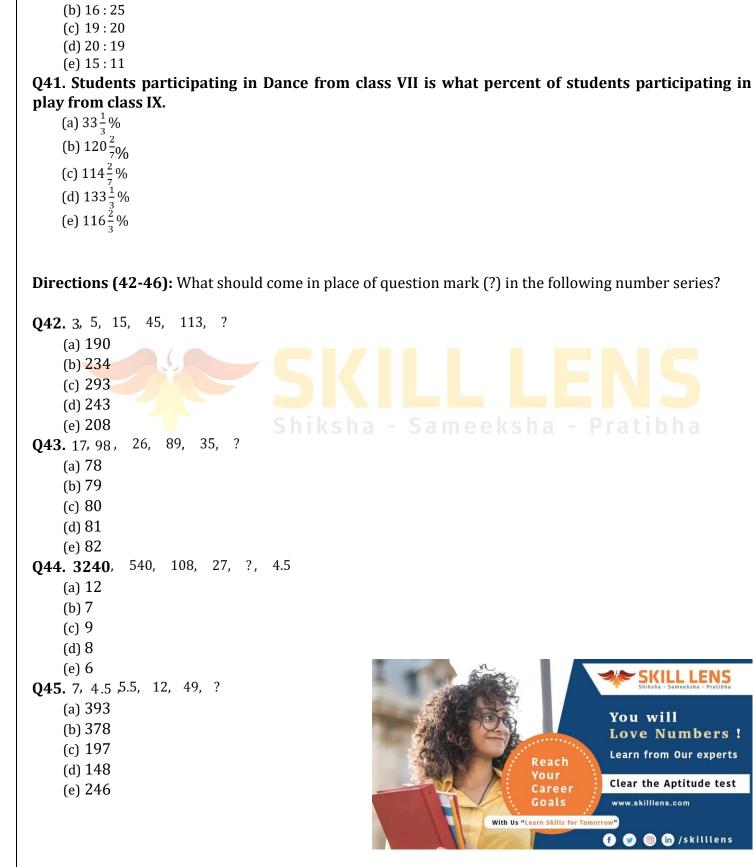**Directions (36-41):** Given below is the table which shows the total students in 4 different schools and percentage of students participating in Dance and Play in 4 different classes.

Classes	Total Students	% of students participating	
		Dance	Play
VI	500	15	8
VII	400	10	6
VIII	360	25	10
IX	250	10	12

Q36. What is the ratio of students participating in Dance from Class VII and IX together to the students participating in Play from class VI and VIII together?
(a) 43 : 53
(b) 65 : 76
(c) 44 : 57
(d) 63 : 71
(e) 62 : 77

Q37. What is the average of students in Play from all the classes?
(a) $32\frac{1}{2}$
(b) $34\frac{1}{2}$
(c) $27\frac{1}{2}$
(d) $35\frac{1}{2}$
(e) $30\frac{1}{2}$

Q38. Students who are participating in dance from class VII are what percent more or less than students who are participating is play from class IX.
(a) $12\frac{2}{7}\%$
(b) $14\frac{2}{7}\%$
(c) $33\frac{1}{3}\%$
(d) $16\frac{2}{3}\%$
(e) $66\frac{2}{3}\%$

Q39. What is the sum of students who do not participate in dance and play from class VI and IX together?
(a) 720
(b) 480
(c) 620
(d) 580
(e) None of these

Q40. If 20% of students who participate in dance from class VI also participate in play then find the ratio of students from class VI who participated only in Dance to students participated only in play.

    (a) 25 : 16

    (b) 16 : 25

    (c) 19 : 20

    (d) 20 : 19

    (e) 15 : 11

Q41. Students participating in Dance from class VII is what percent of students participating in play from class IX.

    (a) $33\frac{1}{3}\%$

    (b) $120\frac{2}{7}\%$

    (c) $114\frac{2}{7}\%$

    (d) $133\frac{1}{3}\%$

    (e) $116\frac{2}{3}\%$

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

Q42. 3, 5, 15, 45, 113, ?

    (a) 190

    (b) 234

    (c) 293

    (d) 243

    (e) 208

Q43. 17, 98, 26, 89, 35, ?

    (a) 78

    (b) 79

    (c) 80

    (d) 81

    (e) 82

Q44. 3240, 540, 108, 27, ?, 4.5

    (a) 12

    (b) 7

    (c) 9

    (d) 8

    (e) 6

Q45. 7, 4.5, 5.5, 12, 49, ?

    (a) 393

    (b) 378

    (c) 197

    (d) 148

    (e) 246

Q46. 2, 17, 89, 359, 1079, ?

   (a) 2134

   (b) 1081

   (c) 2195

   (d) 2159

   (e) 1945

Directions (42-46): In the following questions two equations numbered (I) and (II) are given. You have to solve both equations and

Give answer

(a) if x > y

(b) if x ≥ y

(c) if x < y

(d) if x ≤ y

(e) If x = y or the relationship cannot be established

Q42. (i) $x^2 - 5x + 6 = 0$

   (ii) $3y^2 + 3y - 18 = 0$

Q43. (i) $x^2 - 11x + 30 = 0$

   (ii) $y^2 + y - 20 = 0$

Q44. (i) $2x^2 + 2x - 4 = 0$

   (ii) $y^2 - 5y + 4 = 0$

Q45. (i) $x^2 + 6x - 16 = 0$

   (ii) $y^2 - 6y + 5 = 0$

Q46. (i) $x^2 - 4 = 0$

   (ii) $y^2 - 9y + 20 = 0$

Directions (47-52): Find out of the approximate value of? In the following questions.

Q47. $\sqrt{80.997} - \sqrt{25.001} \times (\sqrt{120.90} + \overline{16.02}) = ?$
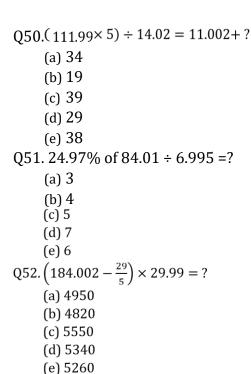
   (a) 50

   (b) 60

   (c) 75

   (d) 70

   (e) 55

Q48. 55.01 – 345.02 ÷ 22.99 = 2 ×?

   (a) 20

   (b) 25

   (c) 22

   (d) 15

   (e) 18

   $\sqrt{3099.985 \div 62.001 + 14.001} = ?$

   (a) 7

   (b) 8

Q49. (c) 6

   (d) 9

   (e) 5

Q50. $(111.99 \times 5) \div 14.02 = 11.002 + ?$

    (a) 34

    (b) 19

    (c) 39

    (d) 29

    (e) 38

Q51. 24.97% of $84.01 \div 6.995 = ?$

    (a) 3

    (b) 4

    (c) 5

    (d) 7

    (e) 6

Q52. $\left(184.002 - \frac{29}{5}\right) \times 29.99 = ?$

    (a) 4950

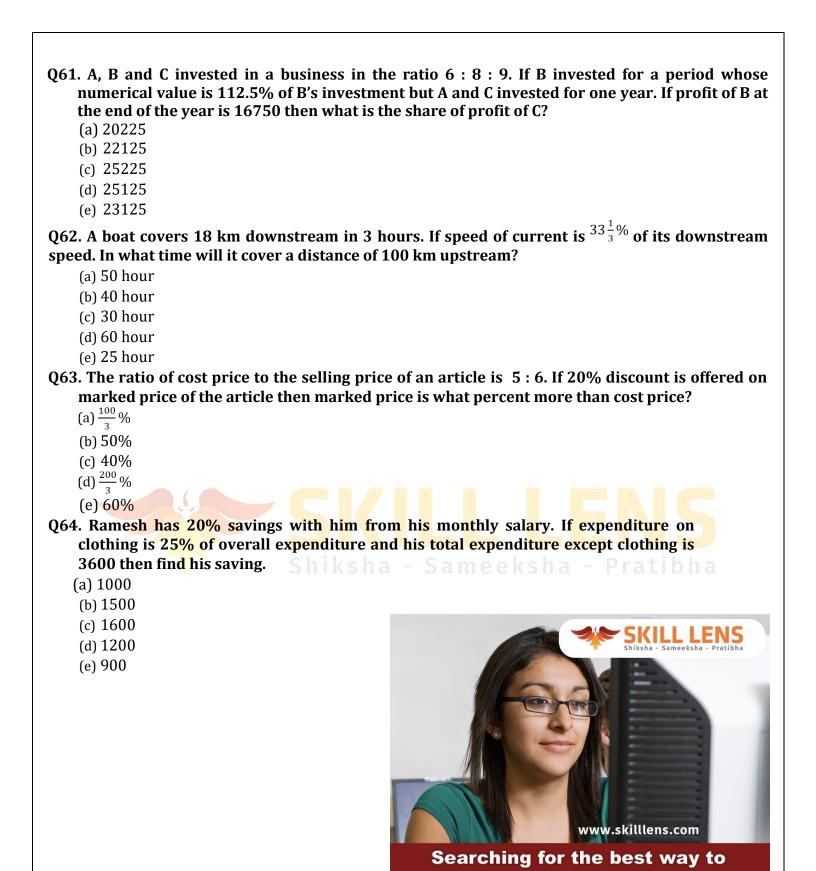   (b) 4820

    (c) 5550

    (d) 5340

    (e) 5260

Q53. Sum of the present ages of A, B, C and D is 76 years. After 7 years ratio of their ages is 7: 6: 5: 8. What is C's present age?

    (a) 14

    (b) 12

    (c) 13

    (d) 8

    (e) 10

Q54. Sum of the length of two trains A and B is 660. The ratio of the speeds of A and B is 5 : 8. Ratio between time to cross an electric pole by A and B is 4 : 3. Find the difference in the length of two trains.

    (a) 50

    (b) 60

    (c) 80

    (d) 75

    (e) 90

Q55. A mixture of milk and water in a jar contains 28 L milk and 8 L water. X L milk and X L water are mixed to form a mixture. If 40% of the new mixture is 20 L, then find the value of X.

    (a) 7 L

    (b) 8 L

    (c) 6 L

    (d) 5 L

    (e) 9 L

Q56. A alone can do a work in 24 days. Time taken by A in completing 1/3 of work is equal to the time taken by B in completing 1/2 of the work. In what time A and B together will complete the work?

(a)   9 days

  (b)   10 days

  (c)   12 days

  (d) $\frac{48}{5}$ days

  (e) 8 days

Q57. Marked price of A is Rs. 1600 more than its cost price. When discount on A is 500 a profit of 25% is obtained. At what price should A be sold to obtain a 30% profit.

(a) 4800

(b) 5600

(c) 5400

(d) 5200

(e) None of these

Q58. The ratio of diameter and height of a right circular cylinder is 4 : 3. If diameter of the cylinder get reduced by 25% then its total surface area reduced to 318.5π square meter. What is the circumference of the base of the cylinder.

(a) $28\pi \ cm^2$

(b) $14\pi \ cm^2$

(c) $35\pi \ cm^2$

(d) $7\pi \ cm^2$

(e) None of these

Q59. The ten's digit of a three digit number is 3. If the digits of x are interchanged and the number thus formed is 396 more than the previous one. The sum of unit digit and hundred digit is 14, then what is the number?

(a) 480

(b) 539

(c) 593

(d) 935

(e) None of these

Q60. S_1 is a series of 4 consecutive even numbers. If the sum of reciprocal of first two numbers of S_1 is 11/60, then what is the reciprocal of third highest number of S_1?

(a) $\frac{2}{13}$

(b) $\frac{1}{14}$

(c) $\frac{2}{17}$

(d) $\frac{1}{13}$

(f) None of these

Q61. A, B and C invested in a business in the ratio 6 : 8 : 9. If B invested for a period whose numerical value is 112.5% of B's investment but A and C invested for one year. If profit of B at the end of the year is 16750 then what is the share of profit of C?
   (a) 20225
   (b) 22125
   (c) 25225
   (d) 25125
   (e) 23125

Q62. A boat covers 18 km downstream in 3 hours. If speed of current is $33\frac{1}{3}\%$ of its downstream speed. In what time will it cover a distance of 100 km upstream?
   (a) 50 hour
   (b) 40 hour
   (c) 30 hour
   (d) 60 hour
   (e) 25 hour

Q63. The ratio of cost price to the selling price of an article is 5 : 6. If 20% discount is offered on marked price of the article then marked price is what percent more than cost price?
   (a) $\frac{100}{3}\%$
   (b) 50%
   (c) 40%
   (d) $\frac{200}{3}\%$
   (e) 60%

Q64. Ramesh has 20% savings with him from his monthly salary. If expenditure on clothing is 25% of overall expenditure and his total expenditure except clothing is 3600 then find his saving.
   (a) 1000
   (b) 1500
   (c) 1600
   (d) 1200
   (e) 900

Direction (65-70): A bar graph is given below which shows two types of hats sold by seller A and seller B on five days.

Q65. The total number of hats sold by A and B together on Wednesday is how much percentage more than the number of hats sold by A and B together on Tuesday?

(a) $15\frac{2}{3}\%$

(b) $8\frac{1}{3}\%$

(c) $16\frac{2}{5}\%$

(d) $16\frac{2}{3}\%$

(e) $21\frac{3}{7}\%$

Q66. If number of hats sold on Friday by A is increased by $14\frac{2}{7}\%$, then what will be the average no. of hats sold on Monday, Wednesday, and Friday by A?

(a) 85

(b) 58

(c) 56

(d) 82

(e) 52

Q67. Find the number of hats sold on Saturday by A and B together, if number of hats sold on Saturday is $7\frac{1}{7}\%$ more than the hats sold on Thursday by A and B together?

(a) 110

(b) 114

(c) 116

(d) 118

(e) 120

Q68. What is the difference between the number of hats sold on Monday and Wednesday by B to the number of hats sold on Friday by both A & B together?

(a) 9

(b) 12

(c) 14

(d) 21

(e) 24

Q69. A sold 80% defective hats on Thursday and B sold 75% defective hats on the same day. Find the number of hats sold by A and B on Thursday that are not defective?

(a) 25

(b) 20

(c) 18

(d) 32

(e) 40

Q70. Find the ratio of number of hats sold by A on Tuesday & Friday together to number of hats sold by B on same days.

(a) 25 : 23

(b) 23 : 25

(c) 21 : 25

(d) 25 : 21

(e) 18 : 17