Most Repeated Quantitative Aptitude Questions for SSC CHSL Tier 1

1. If x+y=10x + y = 10x+y=10 and x2+y2=58x^2 + y^2 = 58x2+y2=58, find xy.
a) 12
b) 16
c) 18
d) 20
Answer: b) 16
2. A train 180 m long passes a platform in 12 seconds. If the speed of the train is 54 km/h, find the length of the platform.
a) 120 m
b) 150 m
c) 180 m
d) 210 m
Answer: b) 150 m
3. The sum of three consecutive odd numbers is 75. Find the numbers.
a) 23, 25, 27
b) 25, 27, 29
c) 21, 23, 25
d) 27, 29, 31
Answer: b) 25, 27, 29
4. A man can row 20 km downstream in 2 hours and the same distance upstream in 4 hours. Find the speed of the stream.
a) 2 km/h
b) 3 km/h
c) 4 km/h
d) 5 km/h
Answer: a) 2 km/h
5. Solve the quadratic equation: x2−5x+6=0x^2 - 5x + 6 = 0x2−5x+6=0
a) x = 2, 3
b) x = -2, -3
c) x = 1, 6
d) x = 3, 4
Answer: a) x = 2, 3
6. If the sum of the first n natural numbers is 210, find n.
a) 20
b) 19
c) 21
d) 22
Answer: c) 20
7. A and B can do a piece of work in 12 days together. B alone can do it in 20 days. In how many days A alone can complete the work?
a) 30 days
b) 24 days
c) 20 days
d) 18 days
Answer: b) 24 days
8. If sin A = 3/5, find cos A.

a) 4/5
b) 5/4
c) 3/4
d) 4/3
Answer: a) 4/5

9. A sum of Rs. 12000 is lent at simple interest. If the rate of interest is 8% per annum, find the interest after 2.5 years.
a) Rs. 2400
b) Rs. 2600
c) Rs. 2500
d) Rs. 2700
Answer: c) Rs. 2400

10. Find the probability of getting a sum of 8 when two dice are rolled.
a) 5/36
b) 7/36
c) 1/6
d) 1/8
Answer: a) 5/36

11. **If x=2+3x = 2 + \sqrt{3}x=2+3, find the value of x2+1x2x^2 + \frac{1}{x^2}x2+x21.**
    a) 14
    b) 10
    c) 7
    d) 13
    Answer: b) 10
12. **The ratio of the ages of A and B is 4:5. After 5 years, the ratio becomes 5:6. Find the present age of A.**
    a) 15 years
    b) 20 years
    c) 25 years
    d) 30 years
    Answer: b) 20 years
13. **A man bought an article at 20% discount on the marked price and sold it for ₹1200, making a profit of 25% on the cost price. Find the marked price.**
    a) ₹1200
    b) ₹1250
    c) ₹1500
    d) ₹1600
    Answer: d) ₹1600
14. **The simple interest on a sum for 5 years is one-fourth of the principal. Find the rate of interest per annum.**
    a) 4%
    b) 5%
    c) 6%
    d) 8%
    Answer: b) 5%
15. **The average of 5 consecutive even numbers is 38. Find the smallest number.**
    a) 30
    b) 32
    c) 34

d) 36
Answer: d) 36

16. The perimeter of a rectangle is 84 cm and its breadth is 16 cm. Find its area.
a) 560 cm²
b) 512 cm²
c) 480 cm²
d) 420 cm²
Answer: a) 560 cm²

17. A man travels 30 km at a speed of 40 km/h and the next 30 km at a speed of 60 km/h. Find his average speed for the entire journey.
a) 45 km/h
b) 48 km/h
c) 50 km/h
d) 52 km/h
Answer: b) 48 km/h

18. The population of a town increases by 10% in the first year and decreases by 10% in the second year. What is the net percentage change in population after 2 years?
a) 0%
b) 1% decrease
c) 1% increase
d) 2% decrease
Answer: b) 1% decrease

19. If a polygon has 20 diagonals, find the number of its sides.
a) 8
b) 9
c) 10
d) 12
Answer: b) 9

21. A cylinder has a radius of 7 cm and height of 10 cm. Find its curved surface area.
a) 420 cm²
b) 440 cm²
c) 450 cm²
d) 500 cm²
Answer: b) 440 cm²

22. If 3 workers can complete a task in 12 days, how many additional workers are needed to complete the same work in 6 days?
a) 2
b) 3
c) 4
d) 6
Answer: a) 2

23. A shopkeeper allows 10% discount on the marked price and still makes a profit of 20%. Find the ratio of the cost price to the marked price.
a) 5:6
b) 6:7
c) 9:11
d) 10:13
Answer: c) 9:11

24. A sum of money doubles itself in 8 years at simple interest. In how many

years will it become three times?
a) 12 years
b) 16 years
c) 18 years
d) 20 years
Answer: b) 16 years

25. A train moving at 90 km/h crosses a pole in 20 seconds. Find the length of the train.
a) 400 m
b) 450 m
c) 500 m
d) 520 m
Answer: b) 450 m

26. If 12 men can complete a work in 15 days, how many days will 20 men take to complete the same work?
a) 8 days
b) 9 days
c) 10 days
d) 11 days
Answer: b) 9 days

27. The average of 10 numbers is 40. If one number is removed, the average becomes 36. Find the number removed.
a) 70
b) 76
c) 80
d) 84
Answer: b) 76

28. If the selling price of 10 articles is equal to the cost price of 12 articles, find the loss percent.
a) 15%
b) 16⅔%
c) 20%
d) 25%
Answer: b) 16⅔%

29. A sphere has a radius of 7 cm. Find its volume.
a) 1428 cm^3
b) 1436 cm^3
c) 1445 cm^3
d) 1456 cm^3
Answer: a) 1428 cm^3

30. The sum of the digits of a two-digit number is 9. If the number obtained by reversing the digits is 27 less than the original number, find the number.
a) 63
b) 72
c) 54
d) 81
Answer: a) 63

31. A person sold an article at 25% profit. If the cost price was ₹480, find the selling price.
a) ₹500
b) ₹580

c) ₹600
d) ₹620
Answer: c) ₹600
Explanation: SP = CP + (25% of CP) = 480 + 120 = ₹600

32. A man covers 240 km at a speed of 60 km/h and returns at 40 km/h. Find his average speed.
a) 48 km/h
b) 50 km/h
c) 45 km/h
d) 52 km/h
Answer: a) 48 km/h
Explanation: Average speed = $(2xy)/(x+y) = (2\times60\times40)/(60+40) = 4800/100 = 48$ km/h

33. If a = 5, b = 3, find the value of $(a^3 - b^3)/(a - b)$.
a) 16
b) 25
c) 34
d) 19
Answer: c) 34
Explanation: $(a^3 - b^3)/(a - b) = a^2 + ab + b^2 = 25 + 15 + 9 = 49$

34. A sum of money doubles itself in 8 years at simple interest. In how many years will it become three times?
a) 12
b) 16
c) 20
d) 24
Answer: c) 16
Explanation: Time $\propto$ Amount increase $\Rightarrow$ To become 3 times (2× interest) = 2×8 = 16 years

35. The population of a town increases by 10% annually. If its population is 50,000 now, find it after 2 years.
a) 58,000
b) 60,500
c) 60,000
d) 60,550
Answer: b) 60,500
Explanation: Population = $50000 \times (1.1)^2 = 50000 \times 1.21 = 60,500$

36. If x : y = 3 : 4, find $(3x + 4y)/(3x - 4y)$.
a) 7/1
b) 7/−1
c) 7/−7
d) 1/7
Answer: b) 7/−1
Explanation: x = 3k, y = 4k $\Rightarrow$ $(9k + 16k)/(9k - 16k) = 25k / (-7k) = -25/7$

37. If the perimeter of a rectangle is 50 cm and its length is 15 cm, find its breadth.
a) 8 cm
b) 10 cm
c) 12 cm
d) 15 cm

Answer: b) 10 cm
Explanation: $2(l + b) = 50 \Rightarrow 15 + b = 25 \Rightarrow b = 10$ cm

38. The sum of the first 15 even numbers is
a) 120
b) 210
c) 240
d) 250
Answer: b) 240
Explanation: Sum = $n(n+1) = 15 \times 16 = 240$

39. Find the simple interest on ₹5000 at 12% per annum for 9 months.
a) ₹450
b) ₹400
c) ₹500
d) ₹480
Answer: a) ₹450
Explanation: SI = $(P \times R \times T)/100 = (5000 \times 12 \times 3/4)/100 =$ ₹450

40. If the circumference of a circle is 88 cm, find its radius.
a) 14 cm
b) 15 cm
c) 16 cm
d) 17 cm
Answer: a) 14 cm
Explanation: $2\pi r = 88 \Rightarrow r = 88/(2 \times 22/7) = 14$ cm

41. The ratio of the sides of a triangle is 3:4:5. If its perimeter is 90 cm, find the area.
a) 54 cm^2
b) 108 cm^2
c) 216 cm^2
d) 324 cm^2
Answer: c) 216 cm^2
Explanation: Sides = 18, 24, 30 ⇒ Area = ½×base×height = ½×24×18 = 216 cm^2

42. The average of 9 numbers is 63. If one number is removed, the average becomes 60. Find the removed number.
a) 87
b) 81
c) 90
d) 78
Answer: a) 87
Explanation: Total of 9 = 9×63 = 567; Total of 8 = 8×60 = 480; Removed = 567−480=87

43. A shopkeeper allows 10% discount on an article. If he still gains 20%, find the marked price when CP = ₹450.
a) ₹540
b) ₹600
c) ₹675
d) ₹700
Answer: c) ₹675
Explanation: SP = 450 + 20% of 450 = 540 ⇒ MP = $(SP \times 100)/(100-10) = (540 \times 100)/90 = 675$

44. Find the number which when increased by 20% becomes 72.
a) 60

b) 65
c) 70
d) 75
Answer: a) 60
Explanation: Let number = x ⇒ x + 20% of x = 72 ⇒ 1.2x = 72 ⇒ x = 60

45. A man invests ₹12,000 at 10% per annum compound interest. Find the amount after 3 years.
a) ₹15,972
b) ₹15,000
c) ₹14,800
d) ₹16,000
Answer: a) ₹15,972
Explanation: $A = 12000(1.1)^3 = 12000 \times 1.331 = ₹15,972$

46. The sum of the ages of a father and son is 60 years. If the father is 4 times as old as his son, find the son's age.
a) 10
b) 12
c) 15
d) 18
Answer: c) 12
Explanation: Let son = x ⇒ father = 4x ⇒ 5x = 60 ⇒ x = 12

47. The ratio of boys to girls in a class is 3:5. If there are 40 students, find the number of boys.
a) 12
b) 15
c) 18
d) 20
Answer: d) 15
Explanation: 3+5=8 ⇒ boys = (3/8)×40 = 15

48. A pipe fills a tank in 12 hours and another empties it in 18 hours. Find the net time to fill the tank.
a) 36 hrs
b) 30 hrs
c) 72 hrs
d) 40 hrs
Answer: b) 36 hrs
Explanation: Net work = 1/12 – 1/18 = 1/36 ⇒ 36 hours

49. The height of a cone is 24 cm and its base radius is 7 cm. Find its volume.
a) 1232 cm^3
b) 1230 cm^3
c) 1200 cm^3
d) 1300 cm^3
Answer: a) 1232 cm^3
Explanation: $V = (1/3)\pi r^2 h = (1/3) \times 22/7 \times 7 \times 7 \times 24 = 1232\ cm^3$

50. If 12 men can complete a work in 8 days, how many men will be required to finish it in 6 days?
a) 14
b) 15
c) 16
d) 18

Answer: c) 16
Explanation: $M_1D_1 = M_2D_2 \Rightarrow 12\times8 = M_2\times6 \Rightarrow M_2 = 16$

51. If A's salary is 25% more than B's and B's salary is 20% less than C's, then how much percent is A's salary of C's?
a) 100%
b) 95%
c) 120%
d) 110%
Answer: d) 110%
Explanation: Assume C = 100 ⇒ B = 80 ⇒ A = 80 × 1.25 = 100 ⇒ A = 100% of C

52. If $\log_{10}2 = 0.3010$ and $\log_{10}3 = 0.4771$, find $\log_{10}54$.
a) 1.732
b) 1.734
c) 1.7321
d) 1.730
Answer: b) 1.734
Explanation: $\log_{10}54 = \log_{10}(2\times3^3) = 0.3010 + 3(0.4771) = 1.7323 \approx 1.734$

53. The cost price of 12 pens equals the selling price of 10 pens. Find profit percentage.
a) 10%
b) 15%
c) 20%
d) 25%
Answer: d) 25%
Explanation: CP of 1 pen = 10/12 = 0.833 ⇒ Profit = $(1-0.833)/0.833 \times100 = 20\%$

54. If A : B = 3 : 4 and B : C = 2 : 5, then A : B : C = ?
a) 3 : 4 : 10
b) 3 : 8 : 20
c) 6 : 8 : 20
d) 3 : 4 : 5
Answer: c) 6 : 8 : 20

55. A sum amounts to ₹9261 in 2 years at 10% compound interest. Find the principal.
a) ₹7600
b) ₹7700
c) ₹7650
d) ₹7605
Answer: b) ₹7700
Explanation: $P = 9261/(1.1)^2 = 9261/1.21 = 7650$

56. Find the least number which when divided by 35, 45, and 55 leaves the same remainder 5.
a) 3465
b) 3460
c) 3470
d) 3485
Answer: b) 3460
Explanation: LCM(35,45,55) = 3465 ⇒ Required = 3465−5 = 3460

57. A shopkeeper mixes two kinds of rice costing ₹40/kg and ₹60/kg in the ratio 3:2. Find the average price per kg.
a) ₹48
b) ₹46
c) ₹50

d) ₹52
Answer: a) ₹48
Explanation: Weighted avg = (3×40 + 2×60)/5 = 48

58. A dishonest trader uses 900g instead of 1kg and still sells at cost price. Find his profit percent.
a) 10%
b) 11.11%
c) 12.5%
d) 9%
Answer: b) 11.11%
Explanation: Profit% = (1000−900)/900 ×100 = 11.11%

59. A sum of ₹8000 becomes ₹10240 in 2 years under compound interest. Find the rate.
a) 10%
b) 12%
c) 14%
d) 15%
Answer: b) 12%
Explanation: $10240 = 8000(1+R/100)^2 \Rightarrow (1+R/100)^2 = 1.28 \Rightarrow R = 12\%$

60. If $\sqrt{(5x+1)} = 11$, find x.
a) 23
b) 24
c) 25
d) 26
Answer: b) 24
Explanation: $5x + 1 = 121 \Rightarrow x = 24$

61. A person sells two articles for ₹990 each. On one he gains 10%, and on the other he loses 10%. Find total gain or loss %.
a) No gain no loss
b) 1% loss
c) 1% gain
d) 2% loss
Answer: b) 1% loss
Explanation: Overall loss% = $(\text{loss}\%^2)/(100-\text{gain}\%) = (10^2)/100 = 1\%$

62. A man walks 10 km towards north, then 6 km east. Find his displacement.
a) 12 km
b) 13 km
c) 14 km
d) 15 km
Answer: b) 13 km
Explanation: $\sqrt{(10^2+6^2)}=\sqrt{136}=13$ km

63. The average of first n odd numbers is
a) n
b) n+1
c) n^2
d) $n^2/2$
Answer: a) n

64. A sum of ₹7500 is invested at 4% compound interest per annum. Find the amount after 2 years.
a) ₹8082
b) ₹8100

c) ₹8088
d) ₹8090
Answer: a) ₹8082
Explanation: $A = 7500(1.04)^2 = 8082$

65. The simple interest on ₹5000 at 8% for certain years is ₹800. Find the time.
a) 2
b) 3
c) 4
d) 5
Answer: c) 2
Explanation: $T = SI \times 100 / (P \times R) = 800 \times 100 / (5000 \times 8) = 2$

66. The radius of a sphere is doubled. Find the ratio of new volume to old volume.
a) 8:1
b) 4:1
c) 2:1
d) 6:1
Answer: a) 8:1
Explanation: Volume $\propto r^3 \Rightarrow 2^3 = 8$

67. If 3A = 4B = 5C, then A:B:C = ?
a) 20:15:12
b) 15:20:25
c) 5:4:3
d) 4:3:2
Answer: a) 20:15:12

68. The average of 7 numbers is 35. When one number is removed, the average becomes 33. Find the removed number.
a) 47
b) 49
c) 42
d) 45
Answer: b) 49

69. A can finish a work in 10 days and B in 15 days. They work together for 5 days. What part is left?
a) 1/6
b) 1/4
c) 1/3
d) 2/5
Answer: a) 1/6

70. If x = 5 and y = 2, find value of $(x^2 + y^2 + xy)$.
a) 39
b) 38
c) 36
d) 35
Answer: a) 39

71. The perimeter of a semicircle is 108 cm. Find its radius.
a) 28 cm
b) 35 cm
c) 36 cm
d) 30 cm

Answer: b) 35 cm
Explanation: $\pi r + 2r = 108 \Rightarrow r(\pi+2)=108 \Rightarrow r \approx 35$

72. The selling price of 15 articles equals cost price of 20. Find gain %.
a) 25%
b) 33⅓%
c) 20%
d) 30%
Answer: b) 33⅓%

73. If a sum triples in 12 years at simple interest, find rate %.
a) 10%
b) 12%
c) 16⅔%
d) 20%
Answer: c) 16⅔%

74. The diagonals of a rhombus are 24 cm and 10 cm. Find its perimeter.
a) 26 cm
b) 30 cm
c) 34 cm
d) 52 cm
Answer: d) 52 cm

75. If 4 men or 6 women can do a job in 15 days, how long will 8 men and 3 women take?
a) 5 days
b) 6 days
c) 7 days
d) 8 days
Answer: b) 6 days

76. Find the HCF of 72, 108, and 216.
a) 18
b) 24
c) 36
d) 12
Answer: c) 36

77. If the selling price of an article is ₹480 and the profit is 20%, find cost price.
a) ₹380
b) ₹400
c) ₹420
d) ₹460
Answer: b) ₹400

78. A train takes 3 seconds to pass a pole and 15 seconds to pass a platform of 360 m. Find length of train.
a) 60 m
b) 72 m
c) 80 m
d) 90 m
Answer: b) 72 m

79. A's age is twice that of B. After 10 years, the ratio becomes 3:2. Find A's present age.
a) 20
b) 30
c) 40

d) 25
Answer: b) 30

80. A cylinder has radius 7 cm and height 10 cm. Find total surface area.
a) 748 cm^2
b) 748.5 cm^2
c) 748.2 cm^2
d) 750 cm^2
Answer: a) 748 cm^2

81. Find the remainder when 5^{400} is divided by 13.
a) 5
b) 6
c) 1
d) 9
Answer: c) 1
Explanation: By Fermat's theorem, $5^{12} \equiv 1 \mod 13 \Rightarrow 5^{396} \equiv 1 \Rightarrow$ remainder = $5^4 = 625 \equiv 1 \mod 13$

82. If A can do a work in 10 days and B can do it in 5 days, how many days will they take together?
a) 3⅓ days
b) 4 days
c) 3 days
d) 2 days
Answer: a) 3⅓ days

83. The value of $(1 + 1/n)^n$ as $n \to \infty$ is equal to
a) 2
b) 3
c) e
d) 1
Answer: c) e

84. A person spends 60% of his income. If his income increases by 20%, what will be the % increase in savings?
a) 30%
b) 40%
c) 50%
d) 80%
Answer: c) 50%

85. A's monthly income is ₹5000. He spends 40% on rent, 20% on food, and saves the rest. Find his savings.
a) ₹1500
b) ₹2000
c) ₹1800
d) ₹1600
Answer: b) ₹2000

86. The area of an equilateral triangle of side 8 cm is
a) $24\sqrt{3}$
b) $16\sqrt{3}$
c) $32\sqrt{3}$
d) $18\sqrt{3}$
Answer: a) $24\sqrt{3}$

87. A can do a piece of work in 20 days and B in 25 days. Together they start the work, but A leaves after 5 days. Find total time.
a) 13 days
b) 14 days
c) 15 days
d) 16 days
Answer: b) 14 days
88. If sin θ = 12/13, find cos θ.
a) 5/13
b) 3/13
c) 9/13
d) 10/13
Answer: a) 5/13
89. A and B together can complete a work in 10 days. A alone takes 15 days. In how many days can B alone complete it?
a) 20
b) 25
c) 30
d) 35
Answer: c) 30
90. If tan A = 3/4, find sec A.
a) 5/4
b) 3/5
c) 4/5
d) 5/3
Answer: a) 5/4
91. Find the sum of first 25 natural numbers.
a) 300
b) 325
c) 350
d) 325
Answer: b) 325
92. The cost of 8 apples is equal to 6 mangoes. If one mango costs ₹9, find the cost of one apple.
a) ₹6.75
b) ₹7
c) ₹6
d) ₹6.50
Answer: a) ₹6.75
93. The average marks of 40 students are 70. If the teacher's marks are added, the average increases by 0.5. Find teacher's marks.
a) 80
b) 90
c) 85
d) 88
Answer: b) 90
94. The difference between compound and simple interest on ₹5000 for 2 years at 10% is
a) ₹50
b) ₹25
c) ₹40

d) ₹45
Answer: a) ₹50

95. A sum of money amounts to ₹1331 in 3 years at compound interest. Find principal if rate = 10%.
a) ₹1000
b) ₹1100
c) ₹1050
d) ₹1200
Answer: a) ₹1000

96. The area of a circle is equal to that of a square of side 14 cm. Find radius.
a) 7
b) 8
c) 9
d) 10
Answer: b) 8

97. Find the smallest number that must be subtracted from 1000 to make it a perfect square.
a) 39
b) 40
c) 41
d) 36
Answer: b) 40

98. A man buys 100 oranges for ₹300. He sells them at ₹4 each. Find profit %.
a) 25%
b) 33⅓%
c) 40%
d) 50%
Answer: d) 50%

99. Find the compound interest on ₹16000 for 1½ years at 10% per annum, compounded annually.
a) ₹2460
b) ₹2480
c) ₹2520
d) ₹2500
Answer: c) ₹2520

100. A and B's ages are in the ratio 3:4. After 5 years, the ratio becomes 4:5. Find A's present age.
a) 15
b) 20
c) 25
d) 30
Answer: c) 25