100 IMPORTANT BANK EXAM QUANT FORMULAS (PUBLIC USE)

1. Percentage = (Value / Total) × 100
2. Increase % = (Increase / Original) × 100
3. Decrease % = (Decrease / Original) × 100
4. New Value = Original × (1 ± %/100)
5. Average = Sum / Number
6. Combined Average = Total Sum / Total Items
7. Ratio a:b = a/b
8. a:b = m:n ⇒ a=km, b=kn
9. Proportion: a/b = c/d ⇒ ad = bc
10. Profit = SP − CP
11. Loss = CP − SP
12. Profit % = (Profit/CP)×100
13. Loss % = (Loss/CP)×100
14. SP = CP × (1 + Profit%/100)
15. SP = CP × (1 − Loss%/100)
16. Discount = MP − SP
17. Discount % = (Discount/MP)×100
18. SI = (P×R×T)/100
19. Amount(SI) = P + SI
20. CI Amount = P(1+R/100)^T
21. CI = Amount − P
22. Speed = Distance/Time
23. Distance = Speed × Time
24. Time = Distance/Speed
25. Relative Speed (same) = |v1−v2|
26. Relative Speed (opposite) = v1+v2
27. Work = Rate × Time
28. Rate = 1/Time
29. Combined Rate = r1+r2
30. Pipe filling = +, emptying = −
31. Mixture Mean = Total/Quantity
32. Allegation Ratio = Difference with mean
33. LCM × HCF = Product of numbers

34. Divisible by 2 $\rightarrow$ last digit even
35. Divisible by 3 $\rightarrow$ sum of digits divisible by 3
36. Divisible by 5 $\rightarrow$ last digit 0 or 5
37. Divisible by 9 $\rightarrow$ sum of digits divisible by 9
38. nPr = n!/(n–r)!
39. nCr = n!/[r!(n–r)!]
40. Probability = Favorable/Total
41. Rectangle Area = l×b
42. Square Area = a^2
43. Triangle Area = ½×b×h
44. Circle Area = πr^2
45. Parallelogram Area = b×h
46. Rhombus Area = ½×d1×d2
47. Trapezium Area = ½(a+b)h
48. Cube Volume = a^3
49. Cuboid Volume = l×b×h
50. Cylinder Volume = $\pi r^2 h$
51. Sphere Volume = $4/3\pi r^3$
52. Cone Volume = $1/3\pi r^2 h$
53. Simple Ratio = Quantity1/Quantity2
54. Mean Proportional = $\sqrt{(ab)}$
55. Time & Work Efficiency $\propto$ Work Done
56. Average Speed = Total Distance / Total Time
57. Boat downstream speed = b+s
58. Boat upstream speed = b–s
59. Stream speed = (Down–Up)/2
60. Boat speed = (Down+Up)/2
61. Train crosses pole time = Length/Speed
62. Train crosses platform time = (Train+Platform)/Speed
63. Income = Savings + Expenditure
64. Savings % = (Savings/Income)×100
65. Expenditure % = (Expenditure/Income)×100
66. Simple Equation: ax+b=c $\Rightarrow$ x=(c–b)/a
67. Linear Pair Sum = 180°
68. Triangle Angle Sum = 180°
69. Exterior angle = sum of interior opposite angles
70. Pythagoras: $a^2+b^2=c^2$
71. Square Diagonal = $a\sqrt{2}$

72. Cube Diagonal = $a\sqrt{3}$
73. Area of sector = $(\theta/360)\pi r^2$
74. Arc length = $(\theta/360)2\pi r$
75. Percentage change approx = $a-b$
76. Two successive % change = $a+b+ab/100$
77. False weight gain% = (Error/True)×100
78. True weight = False×100/(100±error)
79. Odds in favor = Favorable:Unfavorable
80. Odds against = Unfavorable:Favorable
81. Mean = $\Sigma x/n$
82. Median (odd) = $(n+1)/2$
83. Median (even) = avg of n/2 & n/2+1
84. Mode = Most frequent value
85. Mean deviation = $\Sigma|x-\text{mean}|/n$
86. Quadratic roots = $(-b\pm\sqrt{(b^2-4ac)})/2a$
87. Log a■ = n log a
88. log(ab) = log a + log b
89. log(a/b) = log a − log b
90. Simple series sum = $n(n+1)/2$
91. Sum of squares = $n(n+1)(2n+1)/6$
92. Sum of cubes = $[n(n+1)/2]^2$
93. HCF of primes = 1
94. LCM of primes = product
95. Percentage to fraction = x/100
96. Fraction to % = ×100
97. Speed conversion km/h→m/s = ×5/18
98. Speed conversion m/s→km/h = ×18/5
99. Area increases factor = $(\text{new/old})^2$
100. Volume increases factor = $(\text{new/old})^3$