2025

FORMULAS IN MATHEMATICS



COMPILED BY

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1 Speed=$\frac{Distance}{Time}$

2 Time=$\frac{Distance}{Speed}$

3 Distance= Speed × Time

4 Profit= Selling Price — Cost Price

5 **Loss**= Cost price – Selling price

6 **Profit %**= $\frac{Profit}{Cost\ Price}$ ×100

7 **Loss %**= $\frac{Profit}{Cost\ Price}$ × 100

8 **Discount**= Marked Price – Selling Price

9 **Discount %**= $\frac{Discount}{Marked\ Price}$ × 100%

10 **Commission**= $\frac{Commission}{Total\ Sales}$ x 100%

11 **Simple Interest**= $\frac{Principle \times Time \times Rate}{100}$

12 **Principle**=$\frac{100 \times Interest}{Time \times Rate}$

13 **Time**=$\frac{100 \times Interest}{Principle \times Rate}$

14 **Rate**= $\frac{100 \times Interest}{Principle \times Time}$

15 **Total amount**=Interest × Principle

16 **Circumference**= πD **OR** π2r

17 **Perimeter of rectangle**= 2(Length+width)

18 **Area of rectangle**=Length × Width

19 **Area of square**= Side × Side

20 **Area of Parallelogram**= Base x Height

21 **Area of trapezium**= $\frac{1}{2}$ (sum of parallel sides) × Height

22 **Area of a circle**= πr^2

23 ***Finding width when given area and length of a rectangle.***

Width= $\frac{Area}{length}$

24 ***Finding length when given area and length of a rectangle***

Length= $\frac{Area}{Width}$

25 ***Finding side of square when given perimeter of square***

Side= $\frac{perimeter}{4}$

26 ***Finding length when given perimeter and width***

Length= $\frac{Perimeter-(width \times 2)}{2}$

27 ***Finding width when given perimeter and length***

Width=$\frac{Perimeter-(Length\times 2)}{2}$

28 **Area of a Semi Circle**= $\frac{\pi r^2}{2}$

29 **Circumference of Semi circle**= $\frac{\pi D}{2}$

30 **Volume**= Length x width x Height

31 **Length**=$\frac{Volume}{Width\times Height}$

32 **Width**=$\frac{Volume}{Length\times Height}$

33 **Height**=$\frac{Volume}{Length\times Width}$

34 **Mean(Average)**=$\frac{a+b+c+d}{4}$

35 ***Finding base of a parallelogram or rhombus when given area and height***

Base=$\frac{Area}{Height}$

36 ***Finding height of a parallelogram or rhombus when given area and base***

Height=$\frac{\boldsymbol{Area}}{\boldsymbol{Height}}$

37 ***Finding base of a triangle when given area and height***

Base=$\frac{Area \times 2}{Height}$

38 ***Finding height of triangle when given area and base***

Height=$\frac{Area \times 2}{Base}$

TO BE CONTINUED