

No.	Program Title	Formula Used
1	Add two integers	$\text{sum} = a + b$
2	Subtract two integers	$\text{diff} = a - b$
3	Multiply two integers	$\text{product} = a * b$
4	Divide two integers	$\text{quotient} = a / b$
5	Remainder (modulus) of two numbers	$\text{rem} = a \% b$
6	Area of rectangle	$\text{area} = \text{length} * \text{width}$
7	Area of square	$\text{area} = \text{side} * \text{side}$
8	Area of triangle	$\text{area} = (\text{base} * \text{height}) / 2$
9	Area of circle	$\text{area} = \pi * r * r$
10	Circumference of circle	$\text{circumference} = 2 * \pi * r$
11	Volume of sphere	$\text{volume} = (4/3) * \pi * r^3$
12	Surface area of sphere	$\text{area} = 4 * \pi * r^2$
13	Volume of cylinder	$\text{volume} = \pi * r^2 * h$
14	Surface area of cylinder	$\text{area} = 2 * \pi * r * (r + h)$
15	Convert Celsius to Fahrenheit	$F = (C * 9/5) + 32$
16	Convert Fahrenheit to Celsius	$C = (F - 32) * 5/9$
17	Convert kilometers to meters	$m = km * 1000$
18	Convert meters to centimeters	$cm = m * 100$
19	Convert meters to millimeters	$mm = m * 1000$
20	Convert days to weeks	$\text{weeks} = \text{days} / 7$
21	Find remaining days after converting to weeks	$\text{rem\_days} = \text{days} \% 7$
22	Convert hours to minutes	$\text{min} = \text{hr} * 60$
23	Convert hours to seconds	$\text{sec} = \text{hr} * 3600$
24	Convert seconds to hours	$h = s / 3600$
25	Convert remaining seconds to minutes	$m = (s \% 3600) / 60$
26	Find remaining seconds after converting to h:m	$s = s \% 60$
27	Convert rupees to paise	$\text{paise} = \text{rupee} * 100$
28	Simple Interest	$SI = (P * R * T) / 100$
29	Compound Interest	$CI = P * (1 + R/100)^T - P$
30	EMI Calculator	$EMI = [P * R * (1+R)^N] / [(1+R)^N - 1]$
31	Average of 3 numbers	$\text{avg} = (a + b + c) / 3$

32	Perimeter of rectangle	$\text{peri} = 2 * (l + w)$
33	Perimeter of square	$\text{peri} = 4 * \text{side}$
34	Perimeter of triangle	$\text{peri} = a + b + c$
35	Calculate total marks of 5 subjects	$\text{total} = s1 + s2 + s3 + s4 + s5$
36	Calculate percentage of 5 subjects	$\text{perc} = \text{total} / 5$
37	Convert inches to centimeters	$\text{cm} = \text{inch} * 2.54$
38	Convert feet to inches	$\text{inch} = \text{feet} * 12$
39	Convert centimeters to meters	$m = \text{cm} / 100$
40	Convert rupees to dollar	$\text{usd} = \text{inr} / \text{rate}$
41	Calculate GST amount on total	$\text{gst\_amount} = \text{total\_amount} * \text{rate} / 100$
42	Calculate final amount after GST	$\text{final\_amount} = \text{total\_amount} + \text{gst\_amount}$
43	Calculate discount amount on price	$\text{discount\_amount} = \text{price} * \text{disc\_rate} / 100$
44	Calculate final price after discount	$\text{final\_price} = \text{price} - \text{discount\_amount}$
45	Calculate tax amount on salary	$\text{tax\_amount} = \text{salary} * \text{tax\_rate} / 100$
46	Calculate net salary after tax	$\text{net\_salary} = \text{salary} - \text{tax\_amount}$
47	Convert speed from km/hr to m/s	$\text{mps} = (\text{kmph} * 1000) / 3600$
48	Convert speed from m/s to km/hr	$\text{kmph} = (\text{mps} * 3600) / 1000$
49	Convert liters to milliliters	$\text{ml} = \text{liters} * 1000$
50	Power of a number ( $a^b$ ) using math.h	$\text{pow}(a, b)$
51	Display ASCII value of a character	$\text{ASCII} = (\text{int})\text{ch}$
52	Calculate BMI	$\text{BMI} = \text{weight} / (\text{height} * \text{height})$
53	Currency converter (e.g., general conversion)	$\text{converted\_amount} = \text{amount} * \text{rate}$
54	Electricity bill (fixed unit * rate)	$\text{bill} = \text{units} * \text{rate}$
55	Convert years into months	$\text{months} = y * 12$
56	Convert years into days	$\text{days} = y * 365$
57	Convert bytes to KB	$\text{KB} = B / 1024$
58	Convert KB to MB	$\text{MB} = \text{KB} / 1024$
59	Find the square of a number	$\text{sq} = n * n$
60	Find the cube of a number	$\text{cube} = n * n * n$
61	Find square root of given number using math.h	$\text{sqrt}()$
62	Total bill with 18% GST (direct calculation)	$\text{total} = \text{amount} * 1.18$
63	Convert minutes to hours	$\text{hours} = \text{min} / 60$

64	Convert remaining minutes from total minutes	$\text{rem\_min} = \text{min} \% 60$
65	Convert months to total days (assuming 30 days/month)	$\text{total\_days} = \text{months} * 30$
66	Convert months and additional days to total days	$\text{total\_days} = \text{months} * 30 + \text{days}$
67	Calculate total cost of items (quantity and rate)	$\text{total\_cost} = \text{qty} * \text{rate}$
68	Calculate total salary (basic + HRA + DA)	$\text{salary} = \text{basic} + \text{HRA} + \text{DA}$
69	Calculate travel time using distance and speed	$\text{time} = \text{distance} / \text{speed}$
70	Convert a number to 5-digit padded output (e.g., 12 to 00012)	Use %05d in printf()
71	Combine two single digit numbers to make a new number	$\text{combined} = a * 10 + b$
72	Extract tens digit of a 2-digit number	$\text{tens} = n / 10$
73	Extract units digit of a 2-digit number	$\text{units} = n \% 10$
74	Convert decimal hours to integer hours	$h = (\text{int})x$
75	Convert decimal part of hours to minutes	$m = (x - h) * 60$
76	Add two times (hours)	$\text{total\_hr} = \text{hr1} + \text{hr2}$
77	Add two times (minutes) and adjust hours	$\text{total\_min} = \text{min1} + \text{min2}; \text{if}(\text{total\_min} \geq 60) \{ \text{total\_hr}++; \text{total\_min} -= 60; \}$
78	Calculate cube root using math.h	$\text{cbrt}(x)$
79	Convert angle from degrees to radians	$\text{rad} = \text{deg} * \pi / 180$
80	Convert angle from radians to degrees	$\text{deg} = \text{rad} * 180 / \pi$
81	Calculate total marks with first subject 30% weightage	$\text{total} = (x * 0.3)$
82	Calculate total marks with second subject 70% weightage	$\text{total} = (y * 0.7)$
83	Calculate perimeter of semi-circle (arc length)	$\text{arc\_length} = \pi * r$
84	Calculate perimeter of semi-circle (including diameter)	$\text{perimeter} = \pi * r + 2 * r$
85	Divide a number into two equal parts	$\text{half} = \text{num} / 2$
86	Find speed in km/h given distance in meters and time in seconds	$\text{kmph} = (\text{distance\_m} / 1000.0) / (\text{time\_sec} / 3600.0)$
87	Print integer with '+' sign using format specifier	Use printf("%+d", num);
88	Use sizeof() to display memory of int	$\text{sizeof}(\text{int})$
89	Use sizeof() to display memory of float	$\text{sizeof}(\text{float})$
90	Use sizeof() to display memory of char	$\text{sizeof}(\text{char})$
91	Calculate distance = speed × time	$\text{distance} = \text{speed} * \text{time}$
92	Convert days to years	$\text{years} = \text{days} / 365$
93	Convert remaining days (from years) to months	$\text{months} = (\text{days} \% 365) / 30$
94	Find final remaining days	$\text{rem\_days} = (\text{days} \% 365) \% 30$
95	Accept 3 subject marks and find total	$\text{total\_marks} = s1 + s2 + s3$

96	Read a string using %s and print it	<code>scanf("%s", str); printf("%s", str);</code>
97	Read a character and print its ASCII value	<code>scanf("%c", &amp;ch); printf("%d", (int)ch);</code>
98	Concatenate two characters (simple display)	Manual example: <code>printf("%c%c", ch1, ch2);</code>
99	Accept date as dd mm yyyy and display it	Basic input formatting with scanf and printf
100	Calculate average speed from total distance and total time	<code>avg_speed = total_distance / total_time</code>