

ZIMS ACADEMY

Formula for every once use.

1) Area of square	S^2
2) Perimeter of square	$4S$
3) Area of Triangle	$\frac{1}{2} (bxh)$
4) Area of rectangle	lxb
5) Perimeter of Rectangle	$2(l+b)$
6) Area of four walls	$2h(l+b)$
7) Area of a Rhombus	$\frac{1}{2} (d_1 \times d_2)$ product of diagonals
8) Area of quadrilateral	$\frac{1}{2} d(h_1+h_2)$
9) Area of Parallelogram	bxh
10) Area of Trapezium	$\frac{1}{2} h(a+b)$ (sum of // ^{le} sides)
11) Area of Circles	πr^2 or $\frac{d^2}{4}$
12) Perimeter of circle	$2\pi r$ or πd
13) Area of sector	$\frac{r^2 \times \theta}{360}$
14) Length of arc	$\frac{l \times r}{2}$
15) Area of ring	$(R+r)(R-r)$
16) Area of a semi circle	$\frac{\pi r^2}{2}$
17) Perimeter of a semi circle	πr
18) Area of a square path	= Area of outer square - area of inner square
19) Area of a rectangular path	= Area of outer rectangle - area of inner rectangle
20) Volume of a cube	$= S^3$
21) Lateral surface area of cube	$= 4S^2$
22) Total surface area of cube	$= 6S^2$
23) Edges of cube	$= 12$
24) Volume of cuboid	$= l \times b \times h$
25) Lateral surface area of a cuboid	$= 2h(l+b)$
26) Total surface area of cuboid	$= 2(lb+bh+hl)$
27) rise in level of plot	= vol. Of the sand spread / Area of the plot
28) One liter	= 1000 Cu.cm
29) one Hectare	= 10,000 sq.meter.
30) a^0	= 1
31) $a^m \times a^n$	= $a^{(m+n)}$
32) $(a.b)^m$	= $a^m \times b^m$
33) $(a^m)^n$	= $a^{m \cdot n}$
34) a^m / a^n	= $a^{(m-n)}$
35) $1/a^m$	= a^{-m}
36) $(a+b)^2$	= $a^2 + b^2 + 2ab$
37) $(a-b)^2$	= $a^2 + b^2 - 2ab$
38) $(a+b)(a-b)$	= $a^2 - b^2$
39) $a^2 + b^2$	= $(a+b)^2 - 2ab$
40) $(a+b)^3$	= $a^3 + b^3 + 3ab(a+b)$
41) $(a-b)^3$	= $a^3 - b^3 - 3ab(a-b)$

“Travel even to china in search of knowledge” A gift of Almighty Allah.

Lateral surface are of Cube	=	$4a^2$
Total surface are of Cube	=	$6a^2$
Volume of Cube	=	a^3
Lateral surface are of Cuboid	=	$2h(l+b)$
Total surface are of Cuboid	=	$2(lh+bh+lb)$
Volume of Cuboid	=	$l \times b \times h$
Lateral surface are of Prism	=	pxh (where p is perimeter. $p = nxh$)
Total surface are of Prism	=	$ph + 2(\text{area of Triangle base})$
Volume of Prism	=	Area of base X height

Volume of Circular cylinder	V	=	r^2h
Lateral surface area of Circular cylinder		=	$2rh$
Total surface area of Circular cylinder		=	$2r(h+r)$

Volume of Circular Cone	V	=	$r^2h / 3$
Lateral surface area of Circular Cone		=	rl
Total surface area of Circular Cone		=	$r(l+r)$

1 HP	=	746 Watts	1 KW	=	1000watts
1Gallon	=	8.33 Pounds	1Gallon	=	3.785 liters
1 Barrel	=	42 Gallon	1 Meter	=	3.28 feet
1 Miles	=	5280 feet or 1.61 kilometer	1 inches of mercury	=	1.132 feet
frequency	=	no of cycles/time taken	velocity	=	distance/time

Some mathematic values

()Phi	=	3.142			
2	=	1.414	3	=	1.732
7	=	2.64	8	=	2.82
			5	=	2.23
			10	=	3.162

Squares

$(11)^2$	=	121	$(12)^2$	=	144	$(13)^2$	=	169
$(14)^2$	=	196	$(15)^2$	=	225	$(16)^2$	=	256
$(17)^2$	=	289	$(18)^2$	=	324	$(19)^2$	=	361
$(20)^2$	=	400	$(21)^2$	=	441	$(25)^2$	=	625
$(30)^2$	=	900	$(35)^2$	=	1225	$(40)^2$	=	1600

Log_x^{ab}	=	$\log_x a + \log_x b$
$\text{Log}_x (a/b)$	=	$\log_x a - \log_x b$
$\text{Log}_x a^m$	=	$m \log_x a$
$\text{Log}_a a$	=	1

“Its farz for every individual to read and understand Holy Quran” A gift of Almighty Allah.