

Using the Calc3 Custom Menu

(On an 89 press $\boxed{2nd}\boxed{HOME}$ to turn this menu on or off; on a 92 or V200, press $\boxed{2nd}\boxed{3}$)

F1 Misc	solve(equation, variable)	limit (expression, variable, value)
F2 VectAlg	angle_v (1 st vector, 2 nd vector) dotP (1 st vector, 2 nd vector) Proj (1 st vector, 2 nd vector)	crossP (1 st vector, 2 nd vector) length (vector) Triple (1 st vect, 2 nd vect, 3 rd vect)
F3 VectCalc	AccNorm (position vect., var.) Curl (f, g, h, x, y, z) CurvLen (pos. vect., var., a, b) Div (f, g, h, x, y, z) Motion (height, speed, angle, acceleration due to gravity) Stores $\mathbf{v}(t)$ in \mathbf{v} , $\mathbf{r}(t) = [x(t), y(t)]$ in \mathbf{r} , $x(t)$ in \mathbf{x} , $y(t)$ in \mathbf{y} . UnitTan (position vect., var.)	AccTan (position vect., var.) Curvat (position vect., var.) DirDeriv (f, x, y, z , unit vector) Gradient (f, x, y, z) UnitNorm (position vect., var.)
F4 MaxMin	CPts (f, x, y) Lagrange (f, g, x, y, z, c)	Dee (f, x, y) result is stored in variable \mathbf{d} . Fxx (f, x, y) result is stored in variable \mathbf{p} .
F5 Jacob	Jacob2 (f, g, u, v)	Jacob3 (f, g, h, u, v, w)
F6 Coord	Converting from rectangular Converting from cylindrical Converting from spherical To enter the \angle symbol	(x, y, z) Cylind (x, y, z) Sphere $(r, \angle\theta, z)$ Rect $(r, \angle\theta, z)$ Sphere $(\rho, \angle\theta, \angle\phi)$ Rect $(\rho, \angle\theta, \angle\phi)$ Cylind On an 89: Press $\boxed{2nd}\boxed{EE}$ 92 & v200: Press $\boxed{2nd}\boxed{F}$

Calculator Notation: @1, @2, @3, and so on, represent arbitrary integers.

Glossary:

AccNorm (position vect., var.):	Normal component of acceleration.
AccTan (position vect., var.):	Tangential component of acceleration.
angle_v (1 st vector, 2 nd vector):	Angle between two vectors.
CPts (f, x, y):	Finds the critical points of the function $f(x, y)$.
crossP (1 st vector, 2 nd vector):	Cross product of two vectors.
Curl (f, g, h, x, y, z):	Curl of $\mathbf{F}(x, y, z) = f(x, y, z)\mathbf{i} + g(x, y, z)\mathbf{j} + h(x, y, z)\mathbf{k}$.
Curvat (position vect., var.):	Curvature.
CurvLen (pos. vect., var., a, b):	Arc length from var. = a to var. = b .
Dee (f, x, y):	Computes $D = f_{xx}(x, y)f_{yy}(x, y) - [f_{xy}(x, y)]^2$.
DirDeriv (f, x, y, z , unit vector):	Directional derivative of a function of two or three variables.
Div (f, g, h, x, y, z):	Divergence of $\mathbf{F}(x, y, z) = f(x, y, z)\mathbf{i} + g(x, y, z)\mathbf{j} + h(x, y, z)\mathbf{k}$.
dotP (1 st vector, 2 nd vector):	Dot product of two vectors.
Fxx (f, x, y):	Computes $f_{xx}(x, y)$.
Gradient (f, x, y, z):	Gradient of a function of two or three variables.
Jacob2 (f, g, u, v):	Jacobian of the transformation $x = f(u, v)$ and $y = g(u, v)$ from the uv -plane to the xy -plane.
Jacob3 (f, g, h, u, v, w):	Jacobian of the transformation $x = f(u, v, w)$, $y = g(u, v, w)$, and $z = h(u, v, w)$ from uvw -space to the xyz -space.
Lagrange (f, g, x, y, z, c):	Computes the Lagrange multiplier for a function $f(x, y, z)$ subject to the constraint $g(x, y, z) = c$. (This formula may also be used for a function of two variables.)
length (vector):	Length (norm) of a vector.
limit (expression, var., value):	Finds the limit of the expression as var \rightarrow value.
Motion (h, s, angle, g):	Finds the position vector for projectile motion.
Proj (1 st vector, 2 nd vector):	Projection of the 1st vector onto the 2nd vector.
solve (equation, variable):	Solves an equation of one variable. To solve a system of two equations in the two variables var1 and var2 use Solve (equat1 and equat2, {var1, var2}).
Triple (1 st , 2 nd , 3 rd vector):	Triple scalar product of three vectors.
UnitNorm (position vect., var.):	Unit normal vector.
UnitTan (position vect., var.):	Unit tangent vector.