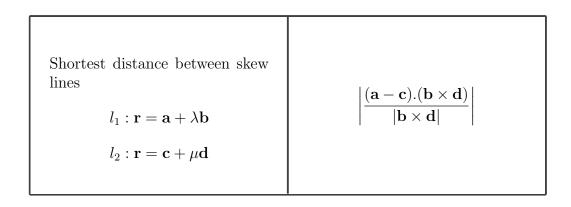
	$(\mathbf{r} - \mathbf{a}) imes \mathbf{b} = 0$
Vector equation of a line with cross product	where a is the position vector of a point the line passes through b is the direction vector

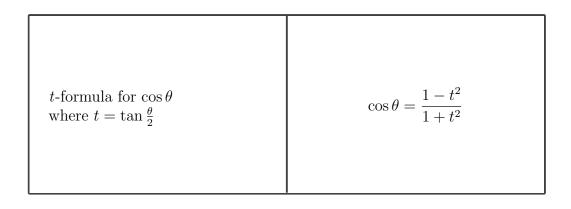


Area of a triangle	$\frac{1}{2} \mathbf{a} imes \mathbf{b} $
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Area of a parallelogram	$ \mathbf{a} imes \mathbf{b} $
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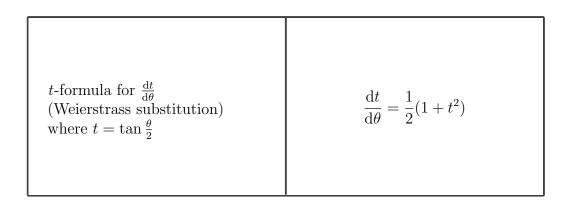
Volume of a Parallelepiped	$ \mathbf{a}.\mathbf{b} imes \mathbf{c} $
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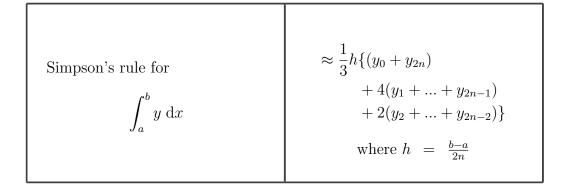
Volume of a Tetrahedron	$rac{1}{6} \mathbf{a}. \mathbf{b} imes \mathbf{c} $
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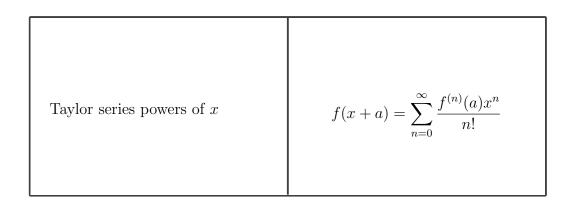


t-formula for
$$\tan \theta$$

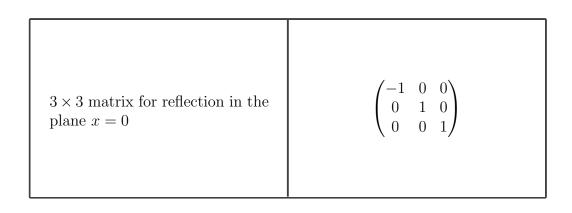
where $t = \tan \frac{\theta}{2}$
 $\tan \theta = \frac{2t}{1-t^2}$



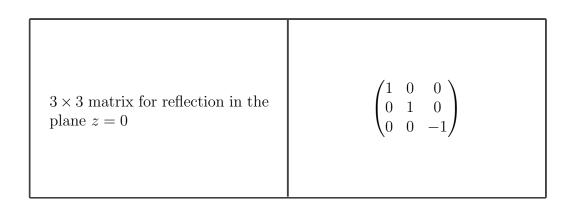




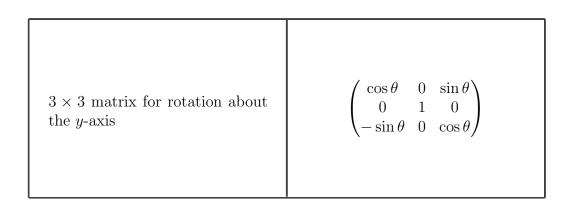
Leibnitz's formula for $\frac{\mathrm{d}^n y}{\mathrm{d} x^n}$	$\frac{\mathrm{d}^n y}{\mathrm{d}x^n} = \sum_{k=0}^n \binom{n}{k} \frac{\mathrm{d}^k u}{\mathrm{d}x^k} \frac{\mathrm{d}^{(n-k)} u}{\mathrm{d}x^{(n-k)}}$
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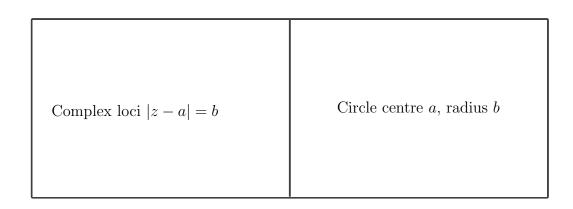
3×3 matrix for reflection in the plane $y = 0$	$\begin{pmatrix} 1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$
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3×3 matrix for rotation about the <i>x</i> -axis	$\begin{pmatrix} 1 & 0 & 0 \\ 0 & \cos\theta & -\sin\theta \\ 0 & \sin\theta & \cos\theta \end{pmatrix}$
--	--



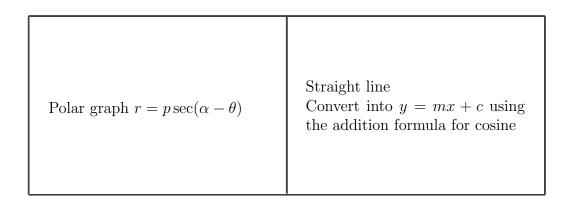
3×3 matrix for rotation about the <i>z</i> -axis	$\begin{pmatrix} \cos\theta & -\sin\theta & 0\\ \sin\theta & \cos\theta & 0\\ 0 & 0 & 1 \end{pmatrix}$
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Complex loci $ z - a = z - b $	Perpendicular bisector of the line joining the com- plex numbers a and b
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Complex loci $\arg(z-a) = \beta$	Half line from the complex number a at an angle of β to the real axis
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Direction cosines of the line $\mathbf{r} = \mathbf{a} + \lambda \mathbf{b},$ where $\mathbf{b} = \begin{pmatrix} x \\ y \\ z \end{pmatrix}$	The angle that the line makes with the axes. Angle with the x-axis, α $\cos \alpha = \frac{x}{ b }$ Angle with the y-axis, β $\cos \beta = \frac{y}{ b }$ Angle with the z-axis, γ $\cos \gamma = \frac{z}{ b }$
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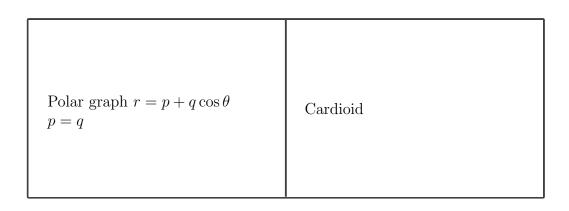
Polar graph $r = a$	Circle centre the pole, radius a
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Polar graph $r = 2a \cos \theta$	Circle centre $(a, 0)$, radius a One symmetric petal
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Polar graph $r = \theta$	Spiral centred at origin
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Polar graph $r = a \cos n\theta$	Only considering $r \ge 0$ Rose with <i>n</i> petals spaced at $\frac{2\pi}{n}$ starting at $(a, 0)$
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Polar graph $r = p + q \cos \theta$	Concave curve "dimple" shaped
$q \leq p < 2q$	limaçon



Polar graph $r = p + q \cos \theta$	Convex curve "egg" shaped
$p \ge 2q$	limaçon

