COMPLEX NUMBERS-- standard form of a complex number: $a+bi$

$r =$ modulus or absolute value length of hypotenuse

Formula for modulus or absolute value: $r = \sqrt{a^2+b^2}$

$\theta =$ argument $=$ reference angle

Formula for argument: $\tan^{-1}\left(\frac{b}{a}\right) = \theta$

How to find x-coordinate: $x = r\cos\theta$ How to find y-coordinate: $y = r\sin\theta$

Complex polar form or Trigonometric form of a complex number: $z = r(\cos\theta + i\sin\theta)$

Complex conjugates $= (r(\cos\theta + i\sin\theta))(r(\cos(-\theta) + i\sin(-\theta))) = r^2$

Product of complex numbers: $z_1 z_2 = r_1 r_2 (\cos(\theta_1+\theta_2) + i\sin(\theta_1+\theta_2))$

Quotient of complex numbers: $\frac{z_1}{z_2} = \frac{r_1}{r_2}(\cos(\theta_1-\theta_2) + i\sin(\theta_1-\theta_2))$

DeMoivre's Theorem: If $z = r(\cos\theta + i\sin\theta)$, then $z^n = r^n[\cos(n\theta + i\sin(n\theta)]$

nth roots of complex numbers: $z = r(\cos\theta + i\sin\theta)$ has exactly n distinct nth roots given by :

$r^{\frac{1}{n}}[\cos\alpha + i\sin\alpha]$, where $\alpha = \frac{\theta+360°k}{n}$ or $\alpha = \frac{\theta+2\pi k}{n}$

COMPLEX NUMBERS-- standard form of a complex number:

$r =$_____ or _____$=$

Formula for modulus or absolute value:

$\theta =$_____$=$

Formula for argument:

How to find x-coordinate: How to find y-coordinate:

Complex polar form or Trigonometric form of a complex number:

Complex conjugates =

Product of complex numbers: Quotient of complex numbers:

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PARAMETRIC EQUATIONS-- standard form of a parametric equations:

$v =$_____=

Formula for velocity:

$\theta =$_____ ____ _____=

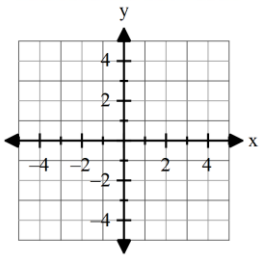
Formula for angle of inclination:

$t =$ _____ = _____

How to find x-coordinate:

How to find y-coordinate:

Graph:



Eliminate parameter:

Write equations as parametric equations:

PARAMETRIC EQUATIONS-- standard form of a parametric equations:

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Formula for velocity:

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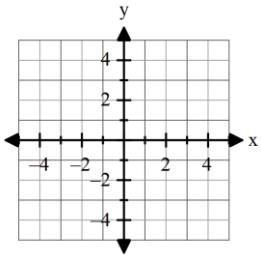
Graph:



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