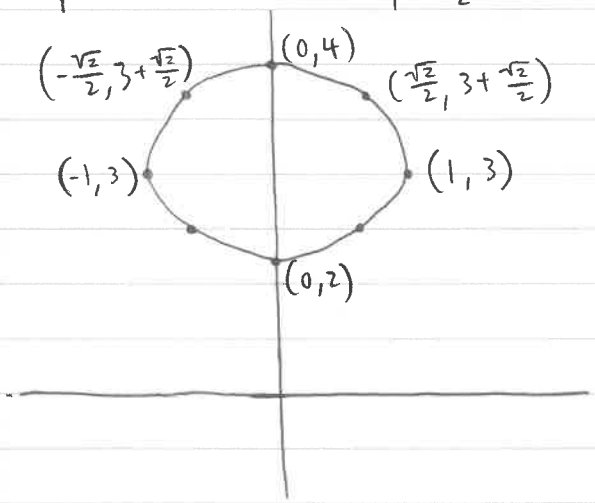
5 If you apply the quadratic formula, the imaginary part (i) comes after the "$\pm$" ($\frac{-b \pm \sqrt{b^2-4ac}}{}$), because square root of a negative b^2-4ac is imaginary. The "$\pm$" shows that $-$imaginary and $+$imaginary both works, so $a+bi$ and $a-bi$ both are roots.

6

when $t=0$	$t=\frac{\pi}{4}$	$t=\pi$	$t=\frac{5\pi}{6}$
$x=\cos 0=1$	$x=\frac{\sqrt{2}}{2}$	$x=0$	$x=-\frac{\sqrt{3}}{2}$
$y=\sin 0+3=3$	$y=3+\frac{\sqrt{2}}{2}$	$y=4$	$y=\frac{1}{2}+3=3.5=\frac{7}{2}$

$t=\frac{3\pi}{2}$	$t=\frac{4\pi}{3}$
$x=0$	$x=-\frac{1}{2}$
$y=2$	$y=-\frac{\sqrt{3}}{2}+3$



It's a circle.