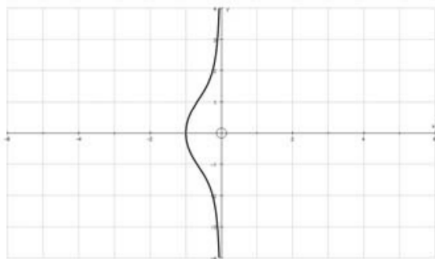


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6. Substituting $x + iy$ for z in the quadratic equation and equating real and imaginary parts yields the first two results, the imaginary gives two situations, one as required and the other substituted into the real gives the second. The first of these two results substituted into the real gives a circle radius 1, centre the origin, whilst the second gives the real axis without the origin. The second quadratic equation succumbs to the same approach giving the real axis without the origin (again), and a circle centre $(-1,0)$ radius 1 also omitting the origin. The same approach in the third case yields the real axis with $p = \frac{-x^2 \pm \sqrt{x^4 - 8x}}{2x}$ and considering the discriminant, $x < 0$ and $x \geq 2$.

On the other hand, $p = -2x$ produces $y^2 = -\frac{x^3+1}{x}$



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