Practice problems.

(1) Find the roots of $x^3 + 3x - 2 = 0$.

(2) Find the roots of $2y^9 - 3y^6 - 1 = 0$. (Hint: make use of your answer to the previous problem.)

(3) Find the roots of $z^4 + 4z + 6 = 0$.

(4) Find the intersection points of the parabola defined by $y = x^2 - 3$ and the hyperbola defined by $xy = 1$.

(5) Find the intersection points of the parabola defined by $y = x^2 - 2x$ and the ellipse defined by $x^2 + 16y^2 = 4$.