

**43** (a) The graph of  $f(x) = 5x^2 + 4x + 1$  does not intersect the  $x$ -axis. Since  $f$  is degree 2, both of its zeros are imaginary.

$$(b) \quad x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{-4 \pm \sqrt{4^2 - 4(5)(1)}}{2(5)} = \frac{-4 \pm \sqrt{-4}}{10} = -\frac{2}{5} \pm \frac{1}{10}\sqrt{4i} = -\frac{2}{5} \pm \frac{1}{5}i$$