

HW32

p28

$$\begin{aligned}
 69. \quad & (x^2 - 2x + 1) - 1 + 2 = 0 \\
 & (x-1)^2 + 1 = 0 \\
 & (x-1)^2 = -1 \\
 & x-1 = \pm i \\
 & \boxed{x = 1 \pm i}
 \end{aligned}$$

$$\begin{aligned}
 70. \quad & (x^2 + 6x + 9) - 9 + 10 = 0 \\
 & (x+3)^2 + 1 = 0 \\
 & (x+3)^2 = -1 \\
 & x+3 = \pm i \\
 & \boxed{x = -3 \pm i}
 \end{aligned}$$

$$\begin{aligned}
 71. \quad & 4(x^2 + 4x + 4) - 16 + 17 = 0 \\
 & 4(x+2)^2 + 1 = 0 \\
 & (x+2)^2 = -1/4 \\
 & x+2 = \pm i/2 \\
 & \boxed{x = -2 \pm i/2}
 \end{aligned}$$

$$\begin{aligned}
 72. \quad & 9(x^2 - 2/3x + 1/9) - 1 + 37 = 0 \\
 & 9(x - 1/3)^2 + 36 = 0 \\
 & 9(x - 1/3)^2 = -36 \\
 & (x - 1/3)^2 = -4 \\
 & x - 1/3 = \pm 2i \\
 & \boxed{x = 1/3 \pm 2i}
 \end{aligned}$$

$2/3 = 2$
 $= 2/6 = 1/3$