

$$8. \begin{array}{r|rrrr} 4 & 1 & -10 & 34 & -40 \\ & & 4 & -24 & 40 \\ \hline & 1 & -6 & 10 & 0 \end{array}$$

$$x^2 - 6x + 10 = 0$$

$$x = \frac{6 \pm \sqrt{4}}{2} = \frac{6 \pm 2i}{2}$$

$$9. \begin{array}{r|rrrrr} 11 & 1 & -6 & 12 & 6 & -13 \\ & & 1 & -5 & 7 & 13 \\ \hline -11 & 1 & -5 & 7 & 13 & 0 \\ & & -1 & 6 & -13 & \\ \hline & 1 & -6 & 13 & 0 & \end{array}$$

$$x^2 - 6x + 13 = 0$$

$$x = \frac{6 \pm \sqrt{-16}}{2} = \frac{6 \pm 4i}{2}$$

$$10. \begin{array}{r|rrrrr} -3 & 1 & 7 & 13 & -23 & -78 \\ & & -3 & -12 & -3 & 78 \\ \hline 2 & 1 & 4 & 1 & -26 & 0 \\ & & 2 & 12 & 26 & \\ \hline & 1 & 6 & 13 & 0 & \end{array}$$

$$x^2 + 6x + 13 = 0$$

$$x = \frac{-6 \pm \sqrt{-16}}{2} = \frac{-6 \pm 4i}{2}$$

$$11. \begin{array}{r|rrrr} 3 & 1 & -7 & 17 & -15 \\ & & 3 & -12 & 15 \\ \hline & 1 & -4 & 5 & 0 \end{array}$$

$$x^2 - 4x + 5 = 0$$

$$x = \frac{4 \pm \sqrt{-4}}{2} = \frac{4 \pm 2i}{2}$$

$$12. \begin{array}{r|rrrrr} \frac{1}{2} & 2 & -9 & 2 & 21 & -10 \\ & & 1 & -4 & -1 & 10 \\ \hline 2 & 2 & -8 & -2 & 20 & 0 \\ & & 4 & -8 & -20 & \\ \hline & 2 & -4 & -10 & 0 & \end{array}$$

$$x^2 - 2x - 5 = 0$$

$$x = \frac{2 \pm \sqrt{24}}{2}$$

$$x = \frac{2 \pm 2\sqrt{6}}{2}$$