1. Use the quadratic formula to solve the equation.

\[ m^2 - 4m + 3 = 0 \]

\[ m = \frac{4 \pm \sqrt{4^2 - 4 \cdot 1 \cdot 3}}{2 \cdot 1} \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

2. Use the quadratic formula to solve the equation. The equation has real number solutions.

\[ 4y = 4y^2 - 8 \]

\[ y = \frac{4 \pm \sqrt{4^2 - 4 \cdot 4 \cdot (-8)}}{2 \cdot 4} \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

3. Use the quadratic formula to solve the equation.

\[ x^2 - 10x + 25 = 0 \]

\[ x = \frac{10 \pm \sqrt{10^2 - 4 \cdot 1 \cdot 25}}{2 \cdot 1} \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

4. Use the quadratic formula to solve the equation.

\[ x^2 + x - 4 = 0 \]

\[ x = \frac{-1 \pm \sqrt{1^2 - 4 \cdot 1 \cdot (-4)}}{2 \cdot 1} \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

5. Use the quadratic formula to solve the equation.

\[ 10m^2 - 2m = 9 \]

\[ m = \frac{2 \pm \sqrt{2^2 - 4 \cdot 10 \cdot (-9)}}{2 \cdot 10} \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

6. Use the quadratic formula to solve the equation. The equation has real number solutions.

\[ \frac{1}{3}x^2 + 4x + 4 = 0 \]

\[ x = \frac{-4 \pm \sqrt{4^2 - 4 \cdot \frac{1}{3} \cdot 4}}{2 \cdot \frac{1}{3}} \]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)
7. Use the quadratic formula to solve the equation.

\[(m - 3)(3m + 4) = 5(m + 1) + 8\]

\[m = \underline{\phantom{000}}\]

(Simplify your answer, including any radicals. Use integers or fractions for any numbers in the expression. Use a comma to separate answers as needed.)

8. Use the discriminant to determine the number and types of solutions of the quadratic equation.

\[x^2 - 6 = 0\]

The equation has (1) \underline{\phantom{000}}

(1) \hspace{1em} \circ \hspace{1em} \text{two real solutions.}

\hspace{1em} \circ \hspace{1em} \text{two complex but not real solutions.}

\hspace{1em} \circ \hspace{1em} \text{one real solution.}

9. Use the discriminant to determine the number and types of solutions of the quadratic equation.

\[4x^2 - 8x = -4\]

The equation has (1) \underline{\phantom{000}}

(1) \hspace{1em} \circ \hspace{1em} \text{two complex but not real solutions.}

\hspace{1em} \circ \hspace{1em} \text{one real solution.}

\hspace{1em} \circ \hspace{1em} \text{two real solutions.}

10. Use the discriminant to determine the number and types of solutions of the quadratic equation.

\[3 = 3x - 5x^2\]

The equation has (1) \underline{\phantom{000}}

(1) \hspace{1em} \circ \hspace{1em} \text{two complex but not real solutions.}

\hspace{1em} \circ \hspace{1em} \text{one real solution.}

\hspace{1em} \circ \hspace{1em} \text{two real solutions.}