Give complete solutions to the following problems be sure to provide all the necessary steps to support your answers.

1. Write the complex number in standard form  $3 + \sqrt{-12}$ 

2. Write the complex number in standard form  $3i^2 - 2i$ 



3. Perform the addition and write the result in standard form (2+3i)+(-2-2i)

4. Perform the multiplication and write the result in standard form (2+i)(2-3i)

Ans\_\_\_\_

5. Perform the division and write the result in standard form.  $5 \div 2i$ 

6. Write the quotient in standard form

 $\frac{2+i}{3+2i}$ 

7. Perform the operation and write the result in standard form

$$\frac{i}{2-i} + \frac{2}{2+i}$$

8. Use the Quadratic Formula to solve the quadratic equation.  $2x^2 - 4x + 3 = 0$ 

9. Solve the given quadratic equation by completing the square  $2x^2 + 4x = -3$ 

| Ans |
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10. Find a polynomial of degree 3 with the given zeros and containing the point: