SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the inequality algebraically. Write the solution in interval notation.

1) $|7x - 1| \geq 4$ 1) _____

2) $|x + 5| \leq 8$ 2) _____

Write the product in standard form.

3) $(5 + 8i)(5 + 2i)$ 3) _____

Find the product of the complex number and its conjugate.

4) $3 + 5i$ 4) _____

5) $4 - 5i$ 5) _____

Write the sum or difference in the standard form a + bi.

6) $(5 - 2i) + (4 + 4i)$ 6) _____

7) $(3 + 8i) - (-2 + i)$ 7) _____

Solve the inequality by graphing . Write answer in interval notation.

8) $x^2 - 4x < 12$ 8) _____

9) $3x^3 - 48x > 0$ 9) _____

Solve the inequality. Use algebra to solve. Write answer in interval notation.

10) $x^2 + 2x - 35 \geq 0$ 10) _____

Solve the problem.

11) If a rocket is propelled upward from ground level, its height in meters after t seconds is   11) _____
given by $h = -9.8t^2 + 58.8t$. During what interval of time will the rocket be higher than 78.4
m?

Solve the equation graphically by finding x–intercepts.

12) $x^3 + 9x^2 + 27x + 23 = 0$ 12) _____

Use a method of your choice to solve the equation.

13) $x^2 - 1 = |x + 2|$ 13) _____

Solve the inequality and draw a number line graph of the solution.

14) $2 < 3x - 2 < 10$ 14) _____

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-10-9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10

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