Algebra II Pre AP Module 3 Test Review

1) Solve $2x^2 - 6x = -18$ by factoring.

2) Find the square of the imaginary number $\frac{-3i\sqrt{8}}{12}$

3) Solve $6x^2 + 15 = 0$ by taking the square root.

4) Simplify (9 - 6*i*) + (3 + 2*i*)

5) Simplify(6 +13*i*) – (- 3+10*i*)

6) Simplify (*i* - 7)(-2 + 8*i*)

Solve using the quadratic formula.

7) $x^2 + 10x = -9$

8) $x^2 + 4x + 5 = 2x + 1$

9) $x^2 + 5x = 3$

10) $2x^2 = -7x - 10$

Find the discriminant of each equation. Then determine the number of real or non-real solutions.

11) $x^2 - 3x = -8$

12) $x^2 + 4x + 3 = 0$

13) $2x^2 - 12x = -18$

Solve each equation by completing the square.

14) $x^2 + 2x = 3$

15) $2x^2 = 8 + 2x$

16) $-3x^2 + 18x = -30$

17) $4x^2 = -12x + 4$

Solve the following equations:

18. Solve $-10|x + 2| = -70$

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19. Solve $-3|x + 2| + 3 = 6$

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Solve the following inequalities. Graph the solution on a number line.

20. Solve $3|-x - 4| + 2 > 5$?

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21. Solve $|2x + 1| - 4 \leq 5$

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22. Solve $-5|2x + 5| + 6 < 16$

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