Name_____Period_____

Algebra 2 Honors November Tune-up #2

SHOW ALL WORK. Give all answers in simplest form. NO CALCULATORS!

1. Solve by CTS: $3x^2 - 24x + 30 = 0$	2. Find the zeros and the maximum or minimum value of $y = 3x^2 - 12x - 15$.
3. Solve over the complex numbers: $5x^2 + 3x + 2 = 0$	4. If $A = 3 - 2i$ and $B = 4 - 3i$ $A + B =$ $A - B =$ $A \cdot B =$ $\frac{A}{B} =$
5. Solve and graph: $\lvert 2x - 3 \rvert \geq 15$	6. Factor completely: $8x^3 - 14x^2 - 15x$

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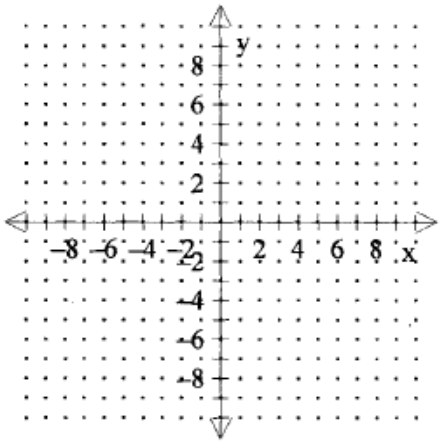
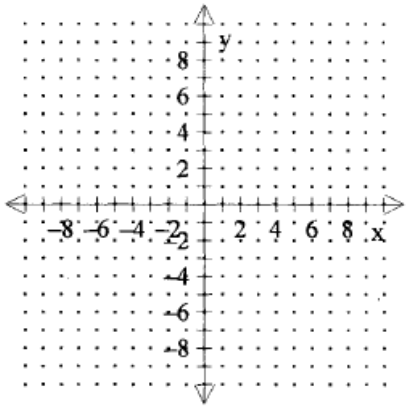
7. Graph: $y = 3(x+4)^2 + 5$



8. Graph: $y = -x^2 - 4x + 5$



9. Solve the system:

$$3x - 2y - 3z = 1$$
$$2x + 3y + z = 4$$
$$x + 2y - z = -5$$

10. The difference between six times a number and its reciprocal is 19. Find the number.