Algebra 2H
Tuneup 8B

Name_____

Period_____ Column_____

SHOW WORK NEATLY. NO CALCULATORS!

1. Evaluate: $6 + 2\left\|3-4\right\| + 16 \div 8(2)$	2. Solve for x: $\frac{2}{3}(x+10) - 14 = \frac{3}{4}(x-1)$
3. Factor and solve for x: $6x^2 - 13x - 5 = 0$	4. If $A = 2 - 3i$ and $B = -1 + 4i$, find $\frac{A}{B}$.
5. Determine the nature of the solutions of $4x^2 + 3x - 2 = 0$ without solving.	6. Write the equation of a parabola congruent to $y = \frac{4}{3}(x+2)^2 - 1$ if it is shifted left 3 units and up 5 units.
7. Simplify: $\frac{\left(5x^{-3}y^{-2}\right)^{-1}\left(4x^{-2}\right)^{2}}{\left(3xy^{2}\right)^{-2}}$	8. Write a polynomial function with zeros -3, $\frac{2}{3}$, and $2i$.

9. Solve. Check for extraneous solutions. $\sqrt[3]{7x-9}+11=14$	10. Find the inverse of $f(x)=3\sqrt{2x+1}$.
11. Classify the conic and write in standard form by completing the square: $x^2-4y^2-6x-16y+29=0$	12. Solve the system algebraically: $5x^2+3y^2=17$ $-x+y=-1$
13. Simplify: $\frac{x}{x^2-4}+\frac{2}{x^2-2x}-\frac{x+1}{x^2+2x}$	14. Simplify: $\left(\frac{1}{y^2}-\frac{1}{x^2}\right)\left(x-\frac{xy}{x-y}\right)$
15. Find the logarithm: $\log_{27} 81$	16. Solve for x: $\log_3(x+3)-\log_3 x=\log_3 2x$