Pre-AP Algebra II
Assignment #32 (Test #14 Review)
[+10 points if completed by Friday 2/7/20]

Name: _____
Period: _____

Directions: Solve the following equations. Check for extraneous solutions.
[Notes #99, #100]

1. $\sqrt{x} = 4$

2. $\sqrt{x} = -4$

3. $\sqrt[3]{x} = -4$

4. $\sqrt{2x-7} + 3 = x$

5. $\sqrt{3x+1} = \sqrt{2x+5}$

6. $-\sqrt[3]{x-2} = -3$

7. $2\sqrt[5]{7x} - 4 = 2$

8. $-\sqrt[4]{7x+2} = 3$

Directions: Solve the following inequalities. Check your solutions.
[Notes #100]

9. $4\sqrt{-2x+3} + 4 \leq 12$

Directions: Simplify.
[Notes #101]

10. $x^{12}\left(x^{14}\right)\left(x^{-52}\right)$

11. $\dfrac{x^7 \delta^2}{x^{12} \delta^{-3}}$

12. $\left(-3x^2\right)^3$

13. $\left(-4x^6\varphi\right)^2 \left(\varphi^2 x\right)^4$

14. $\left(\dfrac{4x^3}{3}\right)^{-3}$

15. $\left(\dfrac{750x^6 y^{14} z^{24}}{1070x^4 y^8 z^7}\right)^0$

Directions: Write in exponential form.
[Notes #101]

16. $\sqrt[5]{x^3}$

17. $\sqrt[6]{7x^5 z^{21}}$

Directions: Write in radical form.
[Notes #101]

18. $x^{\frac{5}{6}}$

19. $x^{2.5}$

Directions: Evaluate.
[Notes #101]

20. $(-27)^{\frac{2}{3}}$

21. $(64)^{-\frac{1}{3}}$

Directions: Simplify.
[Notes #101, #102]

22. $\sqrt{72a^8b^5c^6}$

23. $\sqrt[3]{-32a^9y^{25}q^{19}}$

24. $4\sqrt{40}+3\sqrt{28}-\sqrt{200}$

25. $\left(8\sqrt{3}-2\sqrt{2}\right)\left(8\sqrt{3}+2\sqrt{2}\right)$

26. $\left(6\sqrt{3}+5\sqrt{2}\right)\left(2\sqrt{6}+3\sqrt{8}\right)$

27. $\dfrac{\sqrt{c^5}}{\sqrt{d^9}}$