ALGEBRA 1 PRACTICE TEST ON QUADRATICS

AND SIMPLIFYING RADICALS

Solve the equation.

1. $6-3x^{2}=27$ 2. $2x^{2}-37=35$ 3. $y^{2}+19=33$

4. $\left(6n-9\right)\left(n-7\right)=0$ 5. $x\left(3x+1\right)=0$

6. On graph paper, solve the quadratic equation $x^{2}-3x-4=0$ by graphing.

 On your graph please label your x and y axis, label and write what the axis of

 symmetry is, label the vertex (write the ordered pair next to it). Please make

 sure you write what the roots are on the graph. You table should have at

 least 5 ordered pairs.

Use the quadratic formula to solve the equation

7. $3x^{2}+8x+2=0$ 8. $y^{2}+6y-9=0$ 9. $4x^{2}+12x=7$

Determine how many solutions the quadratic equation has.

10. $2x^{2}-4x-6=0$ 11. $4x^{2}-8x+5=0$

12. Find the roots of the graph of the equation $y=5x^{2}+2x-3$

Solve the quadratic equation by factoring.

13. $3x^{2}-13x+12=0$ 14. $x^{2}+8x+15=0$

15. $6x^{2}-24=0$ 16. $3x^{2}-24x+48=0$

Solve the equation by completing the square.

17. $x^{2}+22x+21=0$ 18. $x^{2}+10x-4=0$

19. What are the x-intercepts of the graph of $y=6x^{2}-x-1?$

Simplify.

20. $\frac{6}{\sqrt{54}}$ 21. $\sqrt{405x^{3}w^{10}}$ 22. $\sqrt{8 }\left(5\sqrt{4}-6\sqrt{9}\right)$

23. $\sqrt[3]{\frac{128x^{2}}{56x^{4}}}$ 24. $\frac{4}{3 + \sqrt{2}}$ 25. $3\sqrt{6}-4\sqrt{24}+2\sqrt{20}$