

Name:

QUIZ – MATH GRADE 11

1. (12%) Solve the following equation using “complete the square “ method.

$$4x^2 - 26x - 14 = 0$$

2. (12%) complete the square in the following expression:

$$3x^2 - 18x + 10$$

3. (8%) Solve the equations:

$$x^{\frac{2}{3}} + 5 = 30$$

$$\sqrt{3 + 2x^2} - \sqrt{13} = 0$$

4. (7%) Solve the equation: $2x^{\frac{5}{3}} = -64$

5. (7%) Solve the equation: $\frac{2\sqrt{x} + 2}{3 - \sqrt{x}} = 6$

6. (8%) Solve the equations, give the solution in the most simplified form

$$\frac{2^{3x+1}}{8} = 8 \cdot \frac{32^x}{4^{1-2x}}$$

7. (7%) Solve the equation: $\sqrt{2x+3} - \sqrt{2x} = 3$

8. (12%) Solve the equation: $3x^5 - 13x^3 = -4x$

9. (12%) Solve the equation: $3^{2x+1} - 2 \cdot 9^x = 3$

10. (7%) Solve the system using substitution:

$$-6x + \frac{y}{15} = 20$$

$$9x - \frac{y}{10} = -30$$

11. (8%) Solve the system using elimination:

$$-\frac{x}{5} + \frac{y}{3} = 3$$

$$2x - \frac{3y}{2} = -19$$

Bonus (5%)

12. Find all the solutions of the equation:

$$(\sin(x))^{x^2-1} = (\cos(x))^{x^2-1}$$