Name:

QUIZ 11A – MATH GRADE 9

Solve the equations for x:

1. (20%) $3x - 4 = 4 - (3 - x)2$

2. (20%) $\dfrac{3x - 4}{3} = \dfrac{1}{2} - 3(3 + 4x)$

3. (20%) $\dfrac{b}{x + 2} = \dfrac{3\,a}{2\,x - 7}$

4. (20%) $a - \dfrac{3}{x-2} = \dfrac{5}{2-x}$

5. (20%) $\dfrac{5}{a\,x-1} = 2 - \dfrac{b+3}{a\,x-1}$

QUIZ 11B – MATH GRADE 9

1. (10%) Solve: $2\sqrt{x} - 4 = -10$

3. (10%) Solve: $\sqrt{x} - 5 = \sqrt{3}$

2. (10%) Solve: $\sqrt{3x} - \sqrt{6} = 0$

4. (15%) Solve: $\dfrac{2}{\sqrt{x} - 2} = 4$

5. (15%) Solve: $2\sqrt{3 - 5x} - 2 = 0$

6. (20%) Solve the equation: $12\sqrt{2x-1} + 2 = 26$

7. (20%) Solve the equation: $\sqrt{3x-1} - \sqrt{9x+1} = 0$

Bonus:(10%) Solve the equation: $\dfrac{\sqrt{x}}{\sqrt{x-3}} = \dfrac{3\sqrt{3x+4}}{6}$

QUIZ 11C – MATH GRADE 9

Solve the equations, give x in its most simplified form

1. (10%) $x^{-2} = 16$ $\qquad$ $x^{-2} = -16$

2. (15%) $x^{-4} = 1$ $\qquad$ $x^{-3} = -8$

3. (15%) $2x^{-\frac{2}{3}} = 1$ $\qquad$ $2x^{-\frac{2}{3}} = -8$

4. (15%) $7x^{-3} = 0$

5. (15%) $5x^{-\frac{3}{2}} = 40$ $\qquad$ $5x^{-\frac{3}{2}} = -40$

6. (15%) Solve the equation, give x in its most simplified form: $2x^{-1} - 3x^{-1} = -5$

7. (15%) Solve the equation, give x in its most simplified form: $4(x+1)^{-1} = -20$

Bonus (10%)

$$5^{x-\frac{1}{2}} - 5^{x+\frac{1}{2}} = -100$$

QUIZ 11D – MATH GRADE 9

Solve the equations, give x in its most simplified form, if not possible, write down between which 2 integers the solution lies.

1. (15%) $2^{-3x} = 1$

5. (10%) $\dfrac{1}{3^x} = -0.1$

2. (15%) $3^x = 0.1$

3. (20%) $\left(\dfrac{2}{\sqrt{2}}\right)^{x+1} = \dfrac{2 \cdot 2^{3x-2}}{8^{x-1}}$

4. (15%) $27^{2-\frac{x}{2}} = \dfrac{1}{9}$

6. (25%) Solve the equation, give x in its most simplified form: $5^{2x+1} - 5^{2x+2} = -\dfrac{4}{5}$

QUIZ 11E – MATH GRADE 9

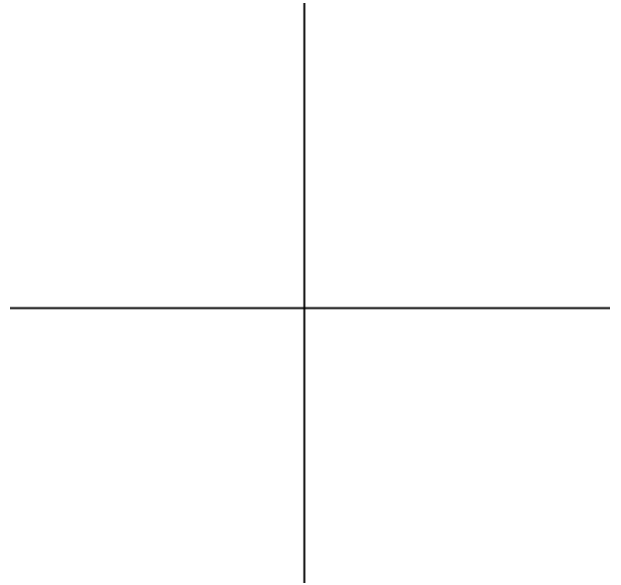1. (35%) Given the following system:

   $2x - 8y = 12$

   a. (5%) 3 solutions of equation I are: _____

   $-\dfrac{x}{2} + 2y = 0$

   b. (5%) 3 solutions of equation II are: _____

   c. (5%) Graph the solutions and Draw the relevant conclusions about the system.

   d. (20%) Solve the system using elimination (equations must ne indicated using roman letters and all operations clearly indicated)

2. (20%) Solve the following system using substitution and draw the corresponding conclusions

   $3x - 6y = -5$
   $-6x + 3y = 1$

3. (20%) Solve the following system using elimination and draw the corresponding conclusions

$$\frac{5x}{6} - 2y = 3$$

$$-\frac{5x}{2} + \frac{2}{3}y = -1$$