Additional Problems: 1-Variable Equations and Inequalities

**Solution Sets of Equations & Inequalities**

1. Which set notation correctly expresses the solution set to the equation 5x + 7 = 22?
   1. (x=3)
   2. {3}
   3. (3)
   4. {x=3}
2. Which set notation correctly expresses the solution set to the equation 2x – 8 = 10?
   1. (x=9)
   2. {9}
   3. (9)
   4. {x=9}
3. Maya, Liam, and Zoe are discussing the solution set to the equation x^2 – 4 = 0

Maya says the solution is {2}

Liam says the solution is {-2, 2}

Zoe says the solution is {-2}

Which person has found the correct solution set?

* 1. Liam
  2. None of them are correct
  3. Zoe
  4. Maya

1. Dante, Ahmed and Olivia are discussing the solution set to the equation x^2 + 16 = 25

Dante says the solution is {3}

Ahmed says the solution is {-3, 3}

Olivia says the solution is {-3}

Which person has found the correct solution set?

* 1. Dante
  2. Ahmed
  3. Olivia
  4. None of them are correct

1. What value falls in the solution set of the inequality 5 – 2x > 7?
   1. (-1)
   2. (1)
   3. (0)
   4. (-2)
2. The solution set of the inequality ( 2(*a* + 1) - 3*a* < 4) is the set of values of *a* less than 4. Which set notation correctly expresses the solutions?
   1. {a : a < 4}
   2. {a : a > 4}
   3. {a : a < 6}
   4. {a : a > 6}
3. Use set notation to express the value(s) that make the equation 3y = 15 true. Enter your response using set notation.
4. Use set notation to express the value(s) that make the equation 4z + 8 = 0 true. Enter your response using set notation.
5. The solution to the inequality 3x - 2 < 7 is x < 3. Use set notation to express the values of x that make the inequality 3x - 2 < 7 true.
6. The solution to the inequality 6y - 4 > 8 is y > 2. Use set notation to express the values of y that make the inequality 6y - 4 > 8 true.