Name:

QUIZ – MATH GRADE 11 SL

1. (20%) Write the function in all other forms: $f(x) = 2x^2 - 8x - 1$

2. (10%) Given the parabola $f(x) = -2(x - k)^2 - 1$. Its discriminant must be _____

   because _____

3. (30%) What values of b make the relation $y = 5x^2 + bx + 5$

   a. (10%) Have 2 zeros

   b. (10%) Have 1 zero

   c. (10%) Have no zeros

4. (10%) Write down a quadratic function that opens downwards, wider that x^2, has its vertex in the 1st quadrant and has 2 zeros.

5. (10%) Given that a certain number squared is a quarter of the consecutive number squared. Write an equation to represent this information. Find the mentioned number.

6. (20%)
   a. Find the value of c so that the function $f(x) = x^2 - 6x + c$ is a perfect square.
   b. Explain the graphical meaning of a quadratic function that can be written as a perfect square.