**Algebra II Performance Assessment – 4th  Quarter Spring 2013**

***Heat Wave* RUBRIC Total Points Possible: 8**

**Question 1 Total Points 4**

Must list all of the following : (1/2 point each for a total of 2 points)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| domain |  | **or**  all real numbers |  | ½ pt |
| range |  | **or** y ≥ 6 |  | ½ pt |
| x-intercepts |  |  |  | ½ pt |
| y-intercept |  |  |  | ½ pt |

Must have at least two of the following: (1 point each for a total of 2 points)

* even function
* positive leading coefficient
* multiplicity at 
* increasing intervals (6,10) and (21,∞)
* decreasing intervals (-∞,6) and (10,21)

**Question 2 Total Points 4**

Model 1 is quadratic. ½ point

Model 2 : ½ point each for any two of parts a, b, and c. (1 point total)

1. This model is cubic
2. The factors should be (x-3)(x-9)(x-20)
3. The factor (x-20) should be squared to reflect multiplicity

Model 3: ½ point each for any two of parts a, b, c, and d. (1 point total)

1. This model is rational
2. This model indicates that there would be asymptotes
3. This model indicates that the multiplicity occurs at  but it occurs at 
4. This model would be discontinuous

Better Model :  ½ point

Justification : The model should reflect that it is an even function, degree 4, with a multiplicity at (20,0) , and a positive leading coefficient 1 point for at least three of the four ideas, ½ point for at least two of the ideas.