## Families of Functions – Review Assignment

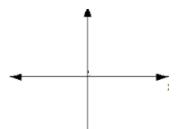
## 1. Sketch the following parent functions:

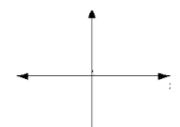
Exponential decay f(x) =

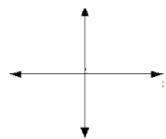
Polynomial ( quadratic) 
$$f(x) =$$

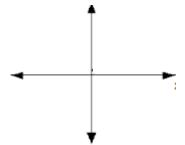
Cubic 
$$f(x) =$$

Radical (square root) 
$$f(x)=$$

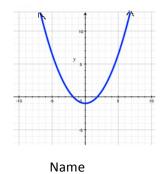


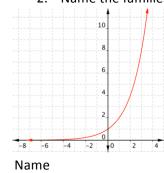


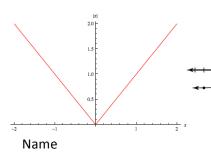


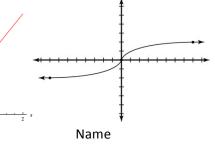


## 2. Name the families for each of the following functions given their graph:

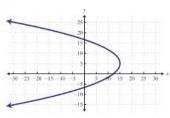


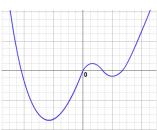


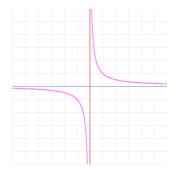




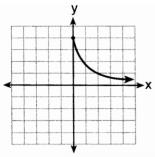
## 3. Function or no function?







4. Answer all the questions for each of the following graphs



|   |          | У |          |     |     |
|---|----------|---|----------|-----|-----|
|   |          |   |          |     |     |
|   |          | T |          | TT  | T   |
|   |          | 1 |          | 1 1 | 1 1 |
|   |          | 1 |          | 1   |     |
|   |          |   |          |     |     |
|   |          |   |          |     |     |
| 1 |          |   | <b>\</b> |     |     |
|   |          |   | 1        |     |     |
|   |          | J |          |     |     |
|   |          |   |          |     |     |
|   |          |   |          |     |     |
|   |          |   |          |     |     |
| L | <u> </u> |   |          |     |     |
|   |          | 1 |          |     |     |
| 1 | 11       | 1 |          |     |     |
|   |          |   |          | 1 1 |     |
| - |          | - |          | 44  |     |
|   | 1 1      |   |          | 1 1 | 1 1 |
| 1 |          |   |          |     |     |
|   |          |   |          |     |     |
|   | <u> </u> |   |          |     |     |

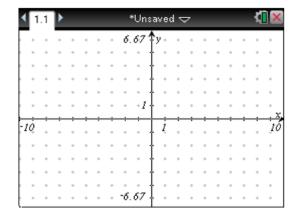
|--|

| Domain       |  |
|--------------|--|
| (interval)   |  |
| Range        |  |
| (interval)   |  |
| Decreasing   |  |
| (interval)   |  |
| Increasing   |  |
| (interval)   |  |
| Asymptotes   |  |
|              |  |
| End behavior |  |
|              |  |
| Symmetry     |  |
|              |  |
| Intercepts   |  |
|              |  |

Sketch the graph of a function that satisfies the following conditions:

Domain: (1, ∞)

Range: (-2, ∞)



Sketch the graph of a function that satisfies the following conditions:

Domain: [ - 8, 4)

Range: [-2, 5)

