Math 4 Honors Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lesson 7-1 Quiz Prep Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 ***NO CALCULATOR***

**Station 1**

**Differentiate each function below. Leave your answers in a tastefully simplified form.**

1.  2.

*Write your answer in factored form.*

*Write your answer as a single fraction in radical form.*

3. 

**Station 2**

Use the function below to answer the following.

 

1. For what values of *x* is *f* increasing? *Use interval notation.*

For what values of *x* is *f* decreasing? *Use interval notation.*

 Increasing :

Decreasing:

1. Identify any extrema.

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**Station 3**

1. If  then  \_\_\_\_\_\_.
2. 1/3 B.) -2/3 C.) 1 D.) 4/3 E.) 3
3.  \_\_\_\_\_\_.
4.  B.)  C.)  D.)  E.) 
5. Find for 
6.  B.)  C.)  D.)  E.) 

**Station 4**

 Given .

1. For what values of *x* is *f* concave up? *Use interval notation.*

For what values of *x* is *f* concave down? *Use interval notation.*

 Up:

Down:

 b. List the *x*-values for the point(s) of inflection