| **Dougherty Valley HS AP Chemistry** | | **Name:** | |
| --- | --- | --- | --- |
| **Equilibrium – Keq Determination** | | **Date:** | |
|  |  | **Period:** | **Seat #: N/A** |

| **Part I Data Table [Fill in title]:** | | | | |
| --- | --- | --- | --- | --- |
| Temperature: \_\_\_\_\_\_\_\_\_ ºC | | |  | |
| **Beaker** | **[FeSCN2+]** | **Absorbance** | **Work for [FeSCN2+] calculation: [to be included in the calculation section – new page in document]** | |
| **1** |  |  |
| **2** |  |  |
| **3** |  |  |
| **4** |  |  |
| **Linear Regression equation**: | | | |  |

| **Part II** | | |  |
| --- | --- | --- | --- |
| **Beaker** | **Absorbance** | **[FeSCN2+] at equilibrium** | **Work for [FeSCN2+] calculation: [to be included in the calculation section – new page in document]** |
| **A** |  |  |
| **B** |  |  |
| **C** |  |  |

| Beaker A |  | **Fe3+** | **SCN–** | **FeSCN2+** | **Part II Calculations [one calc per type for each beaker]** |
| --- | --- | --- | --- | --- | --- |
| Initial |  |  | 0.00 | **All calculations must be completed by hand**. Photo/scan your calculations and insert into another page in the document below. Label it clearly |
| Change |  |  |  |
| Equilibrium |  |  |  |
|  |  |  |  |  |
| Beaker B |  | **Fe3+** | **SCN–** | **FeSCN2+** |
| Initial |  |  | 0.00 |
|  | Change |  |  |  |
|  | Equilibrium |  |  |  |
|  |  |  |  |  |
| Beaker C |  | **Fe3+** | **SCN–** | **FeSCN2+** |
| Initial |  |  | 0.00 |
|  | Change |  |  |  |
|  | Equilibrium |  |  |  |
|  |  |  |  |  |

1. Fill out the table below and then calculate the value of *Keq* for the reaction for each Beaker. Explain how you used the data to calculate *Keq*.

|  | **A** | **B** | **C** |
| --- | --- | --- | --- |
| [FeSCN2+] |  |  |  |
| [Fe3+] |  |  |  |
| [SCN–] |  |  |  |

Insert images of all your calculations below. Name in ink MUST be on each picture