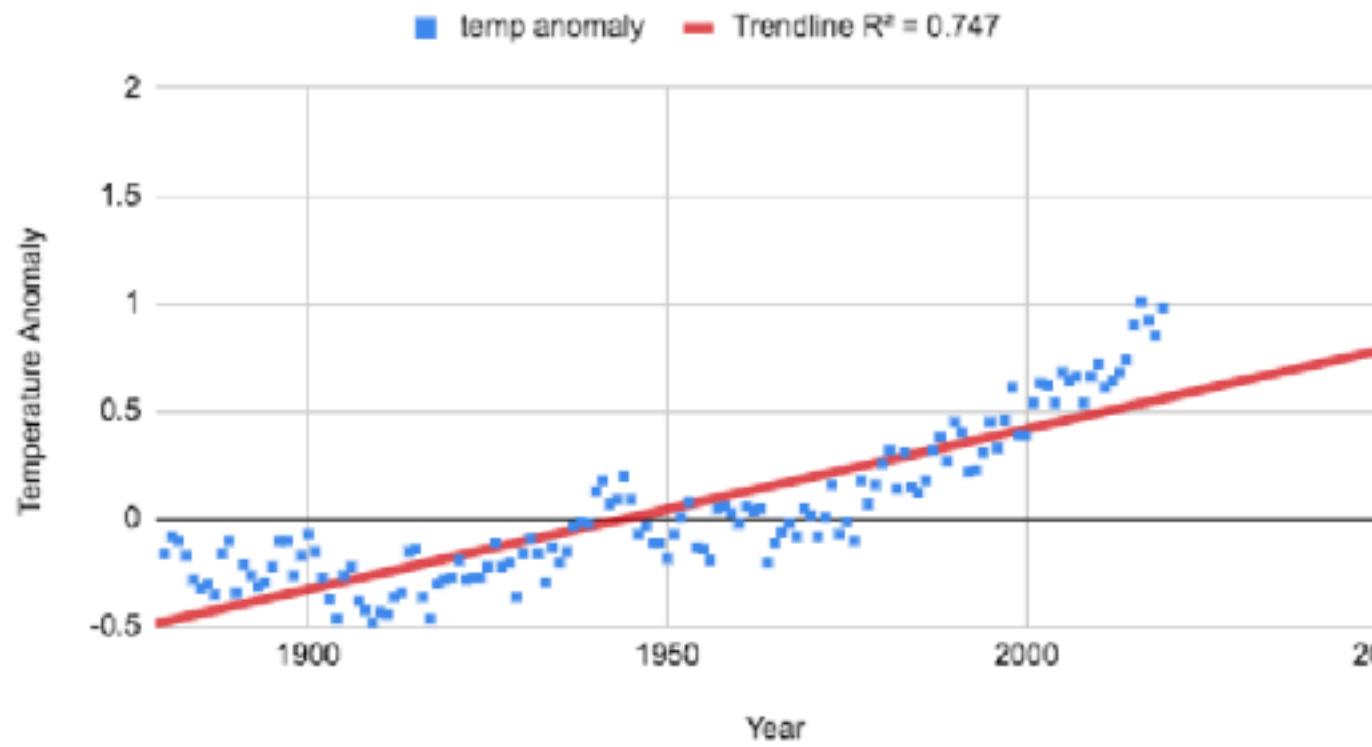
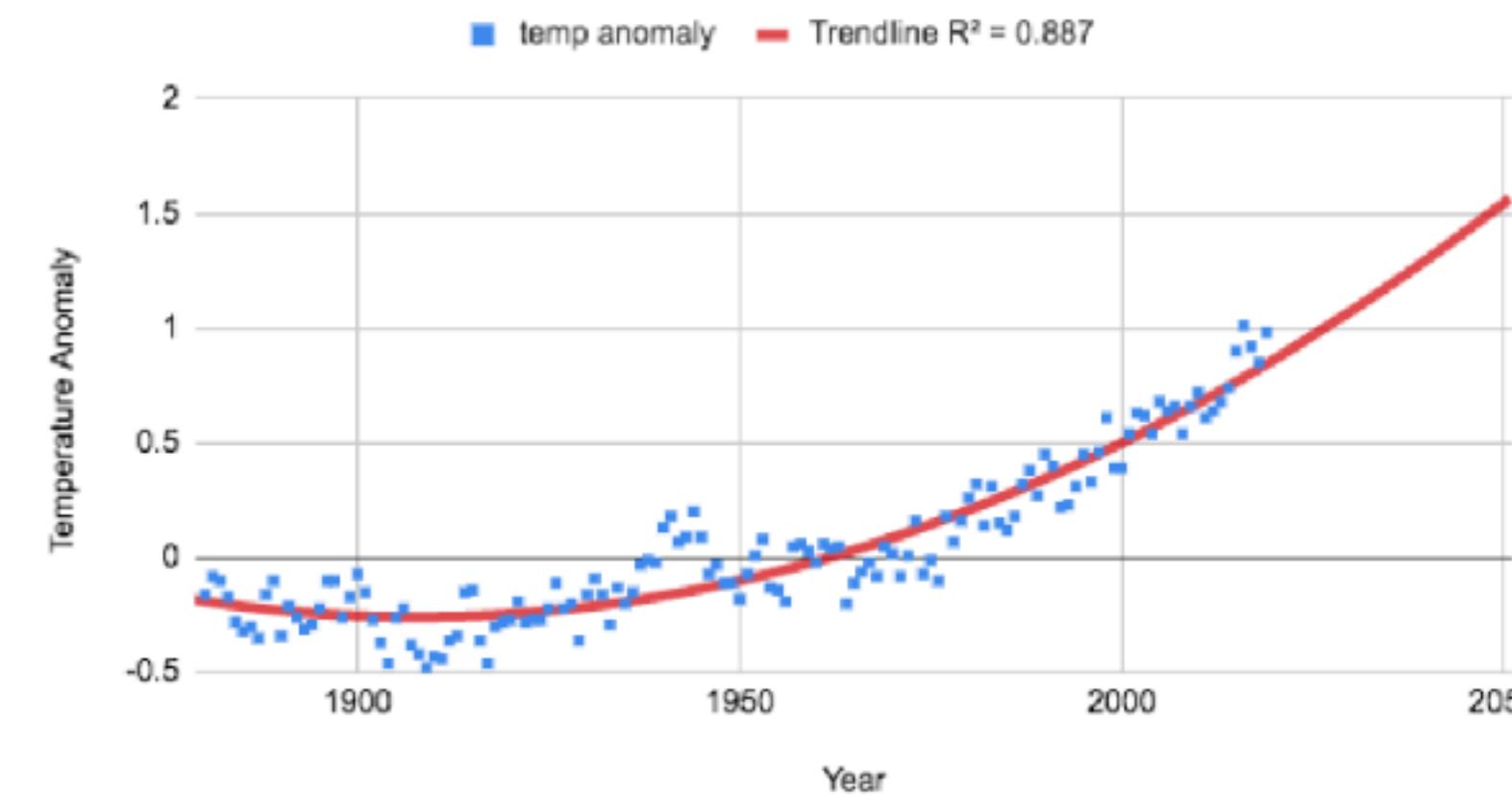


Temperature Anomalies From 1880-2019 & Predictions



Temperature Anomalies From 1880-2019 & Predictions



Decade	Average	Standard deviation
1880-1889	-0.2	0.1
1890-1899	-0.23	0.083
1900-1909	-0.23	0.14
1910-1919	-0.31	0.11
1920-1929	-0.24	0.067
1930-1939	-0.12	0.088
1940-1949	0.044	0.12
1950-1959	-0.048	0.11
1960-1969	-0.029	0.085
1970-1979	0.034	0.1
1980-1989	0.25	0.091
1990-1999	0.39	0.12
2000-2009	0.59	0.088
2010-2019	0.81	0.15

**Calculate Mean of Distributions A & B**

<b>Distribution A</b> Mean (Average): <input type="text" value="0.39"/> Standard Deviation: <input type="text" value="0.17"/> Number of Events: <input type="text" value="26"/> Error on Mean: <input type="text" value="0.06"/>	<b>Distribution B</b> Mean (Average): <input type="text" value="0.081"/> Standard Deviation: <input type="text" value="0.16"/> Number of Events: <input type="text" value="26"/> Error on Mean: <input type="text" value="0.06"/>	<b>Result</b> Average of Two Means: <input type="text" value="0.235"/> Standard Deviation of Average: <input type="text" value="0.05"/> Difference of means (in units of standard deviation): <input type="text" value="5.62"/>
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Z-statistic = 9.62 which is over 3 so it is **highly statistically significant**.

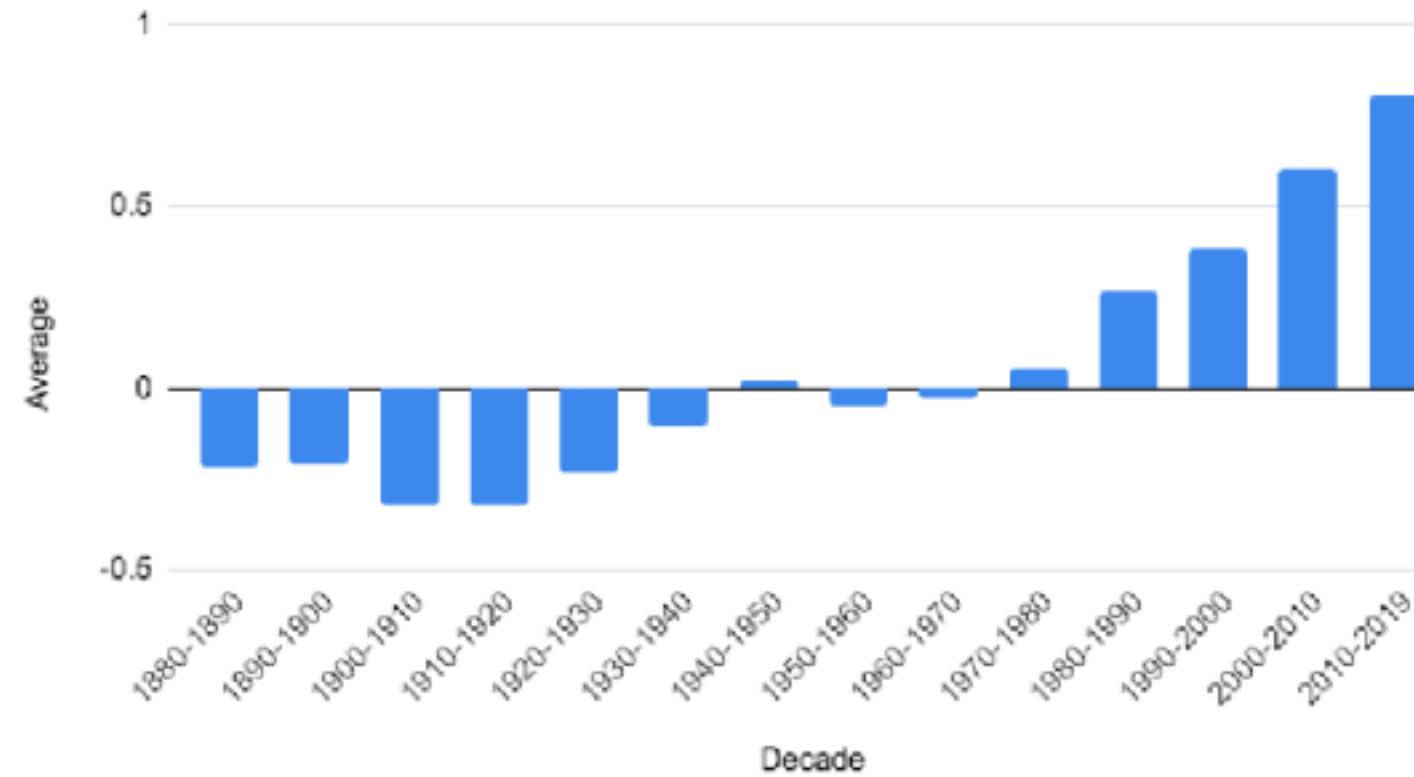
**Distribution A: 1991-2015**

**Distribution B: 1965-1990**

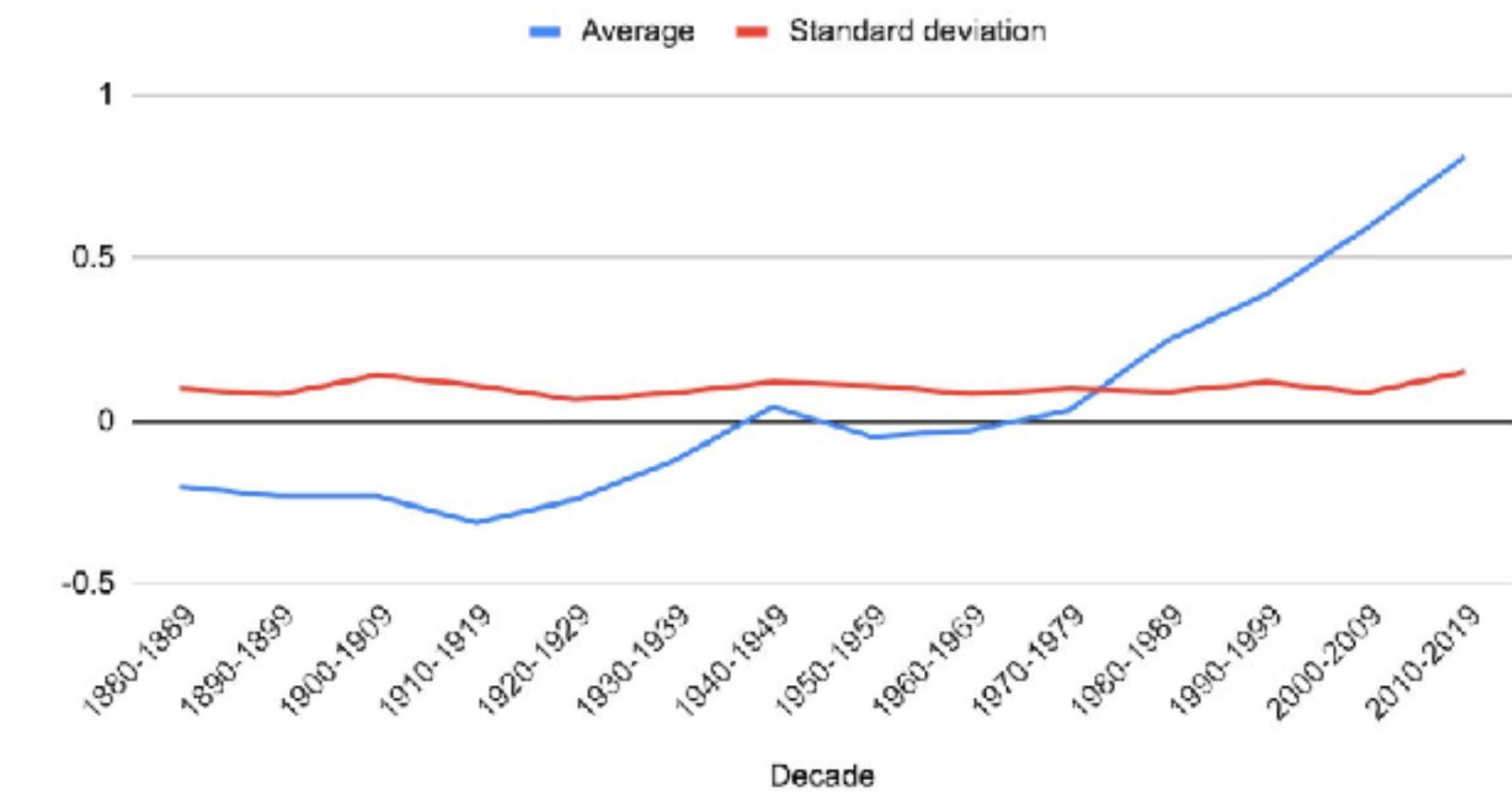
<b>Distribution A</b> Mean (Average): <input type="text" value=".63"/> Standard Deviation: <input type="text" value="0.15"/> Number of Events: <input type="text" value="25"/> Error on Mean: <input type="text" value="0.03"/>	<b>Distribution B</b> Mean (Average): <input type="text" value=".14"/> Standard Deviation: <input type="text" value="0.14"/> Number of Events: <input type="text" value="25"/> Error on Mean: <input type="text" value="0.03"/>	<b>Result</b> Average of Two Means: <input type="text" value="0.39"/> Standard Deviation of Average: <input type="text" value="0.01"/> Difference of means (in units of standard deviation): <input type="text" value="11.94"/>
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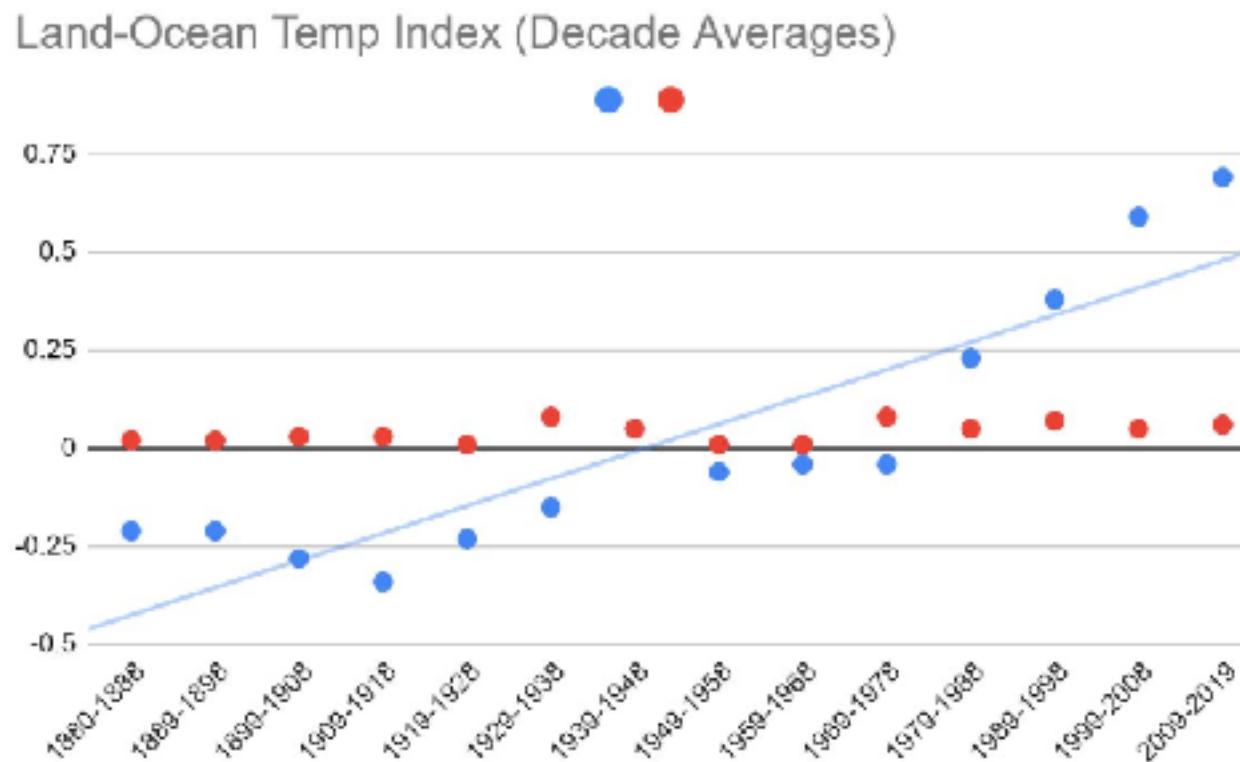
The Z-test came up with a value of 11.9 standard deviations, suggesting an **incredibly significant** difference between the two 25 year periods.

Decades vs. Averages

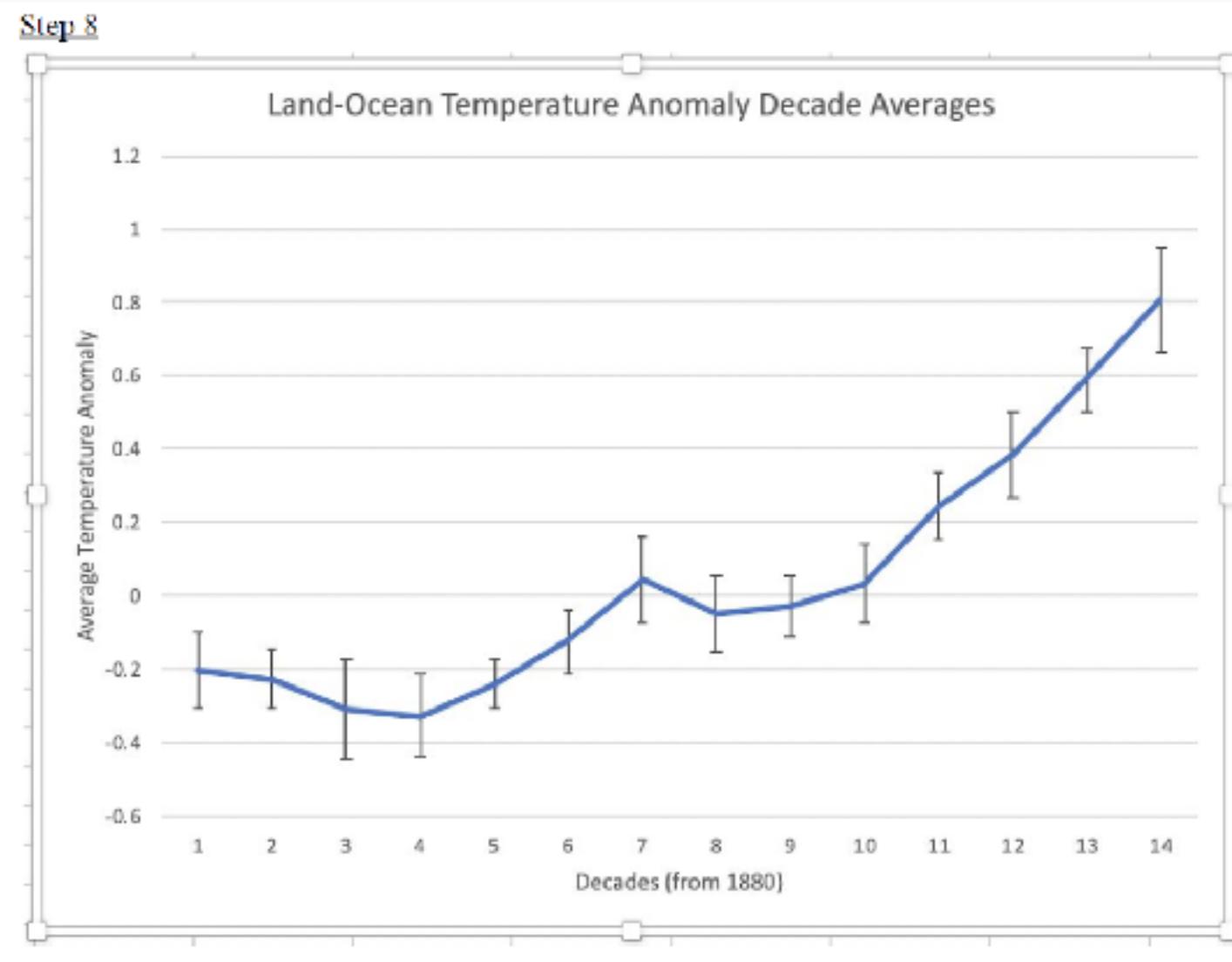


Average and Standard deviation





Blue: anomaly values  
Red: Standard deviations



## 10 Year Average Temperature Anomalies

