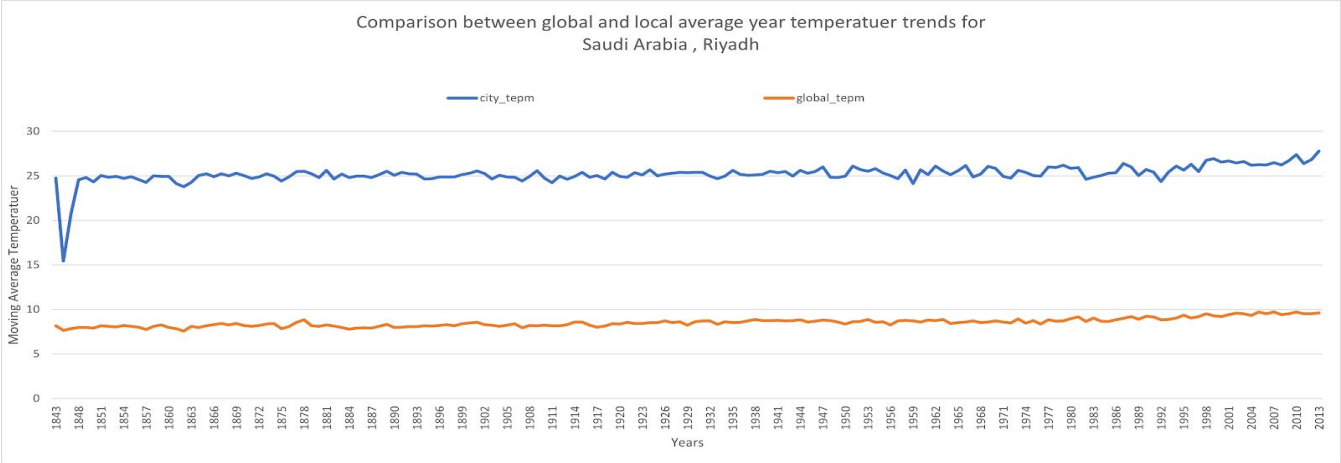
Exploring Weather Trends

The SQL query used to extract the data is included.

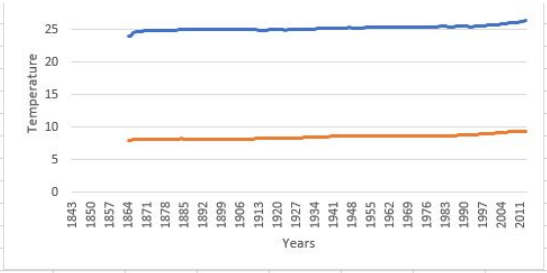
```
SELECT c.avg_temp as city_tepm, g.avg_temp as global_tepm ,c.country,g.year,c.city
FROM global_data g
JOIN city_data c
ON c.year = g.year
WHERE c.city = 'Riyadh'
```

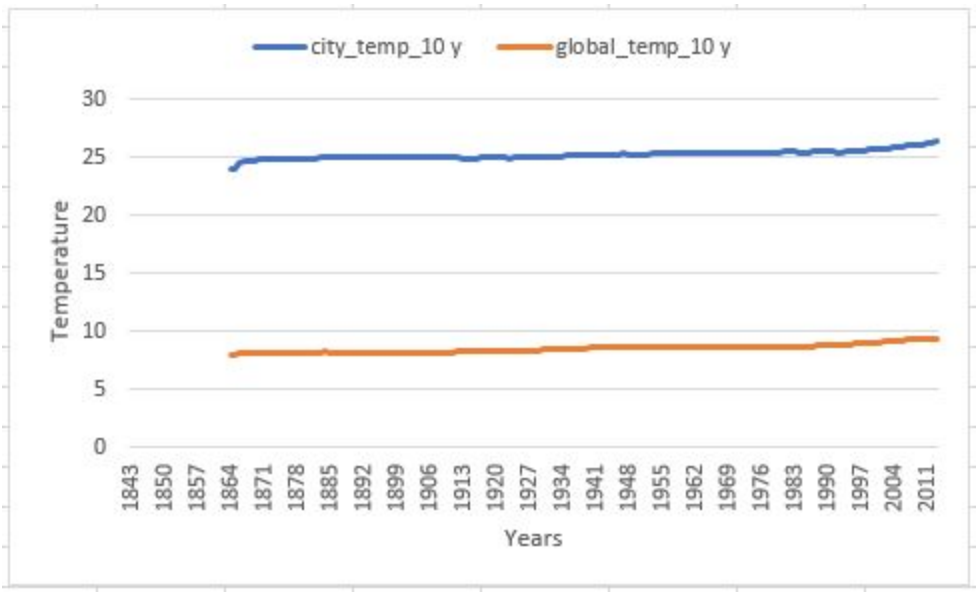
The tool that is used in the spreadsheet is EXCEL



Riyadh	1843	24.74		1843	8.17	
Riyadh	1844	15.45		1844	7.65	
Riyadh	1845	20.82		1845	7.85	
Riyadh	1846			1846	8.55	
Riyadh	1847			1847	8.09	
Riyadh	1848	24.56		1848	7.98	
Riyadh	1849	24.8		1849	7.98	
Riyadh	1850	24.34		1850	7.9	
Riyadh	1851	25.03		1851	8.18	
Riyadh	1852	24.85		1852	8.1	
Riyadh	1853	24.93		1853	8.04	
Riyadh	1854	24.72		1854	8.21	
Riyadh	1855	24.92		1855	8.11	
Riyadh	1856	24.57		1856	8	
Riyadh	1857	24.26		1857	7.76	
Riyadh	1858	25.01		1858	8.1	
Riyadh	1859	24.95		1859	8.25	
Riyadh	1860	24.94		1860	7.96	
Riyadh	1861	24.13		1861	7.85	
Riyadh	1862	23.77		1862	7.56	
Riyadh	1863	24.28		1863	8.11	
Riyadh	1864	25.03	24.005	1864	7.98	=AVERAGE(F2:F23
Riyadh	1865	25.23	24.0295	1865	8.18	

Riyadh	1849	24.8		1849	7.98	
Riyadh	1850	24.34		1850	7.9	
Riyadh	1851	25.03		1851	8.18	
Riyadh	1852	24.85		1852	8.1	
Riyadh	1853	24.93		1853	8.04	
Riyadh	1854	24.72		1854	8.21	
Riyadh	1855	24.92		1855	8.11	
Riyadh	1856	24.57		1856	8	
Riyadh	1857	24.26		1857	7.76	
Riyadh	1858	25.01		1858	8.1	
Riyadh	1859	24.95		1859	8.25	
Riyadh	1860	24.94		1860	7.96	
Riyadh	1861	24.13		1861	7.85	
Riyadh	1862	23.77		1862	7.56	
Riyadh	1863	24.28		1863	8.11	
Riyadh	1864	25.03	24.005	1864	7.98	8.017272727
Riyadh	1865	25.23	24.0295	1865	8.18	8.017727273
Riyadh	1866	24.92	24.503	1866	8.29	8.046818182
Riyadh	1867	25.22	24.723	1867	8.44	8.073636364
Riyadh	1868	25	24.73619048	1868	8.25	8.06
Riyadh	1869	25.3	24.76181818	1869	8.43	8.075454545
Riyadh	1870	25.02	24.78272727	1870	8.2	8.085454545
Riyadh	1871	24.73	24.77954545	1871	8.12	8.091818182





Then I have calculated the moving average by excel in 10 years

The observations:

- **Is your city hotter or cooler on average compared to the global average? Has the difference been consistent over time?**
- My city's temperature is hotter on average than the global temperature average and the difference has been consistent over time.

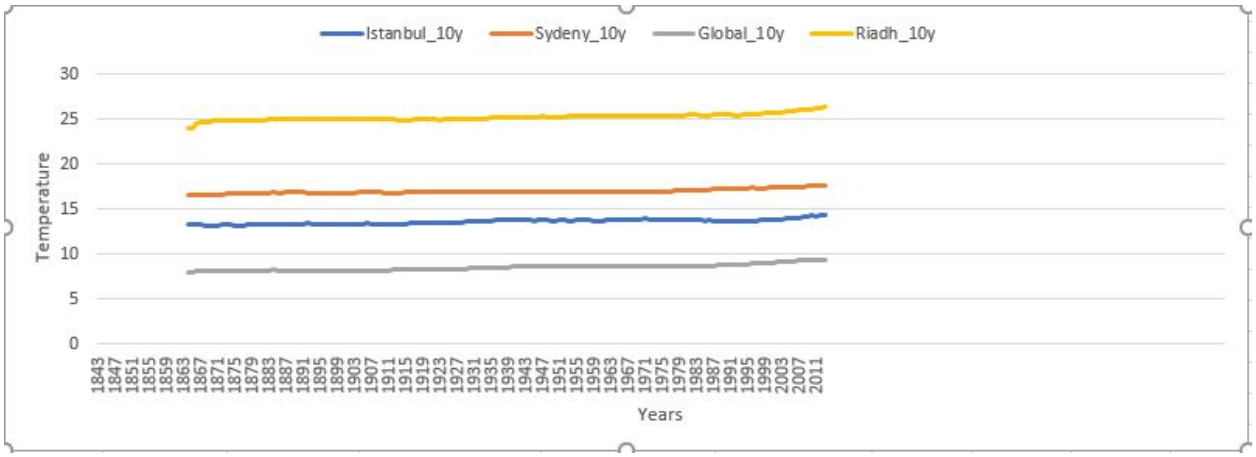
How do the changes in your city's temperatures over time compare to the changes in the global average?

- Over time, both temperatures are increasingly getting hotter.

- **What does the overall trend look like? Is the world getting hotter or cooler? Has the trend been consistent over the last few hundred years?**
- Both of them are getting hotter over time and the trend has been consistent over the last few hundred years.

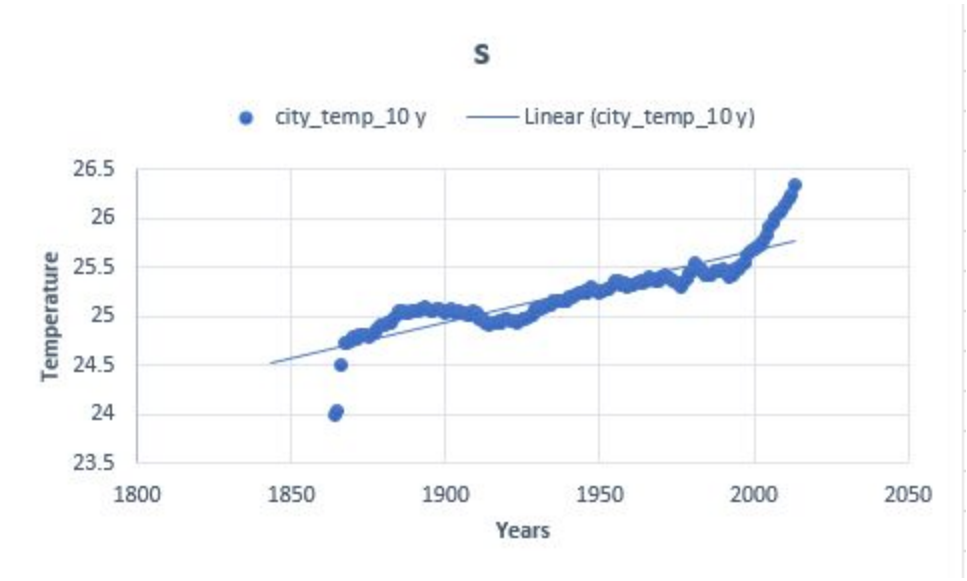
Can you estimate the average temperature in your city based on the average global temperature?

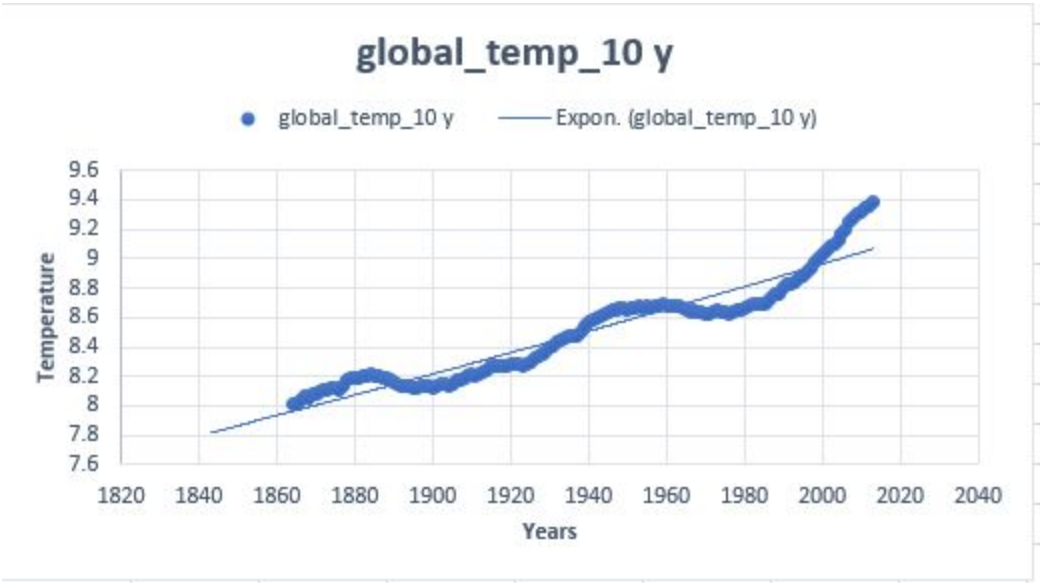
- I can estimate the average temperature in my city based on the average global temperature by adding 17 to the average global temperature.



Multiple cities - Add your favorite cities from around the globe to your visualization. What do you learn about them?

- I have added two other cities and over time, I noticed all temperatures are increasingly getting hotter around the globe.





What's the correlation coefficient?

Strong and positive.