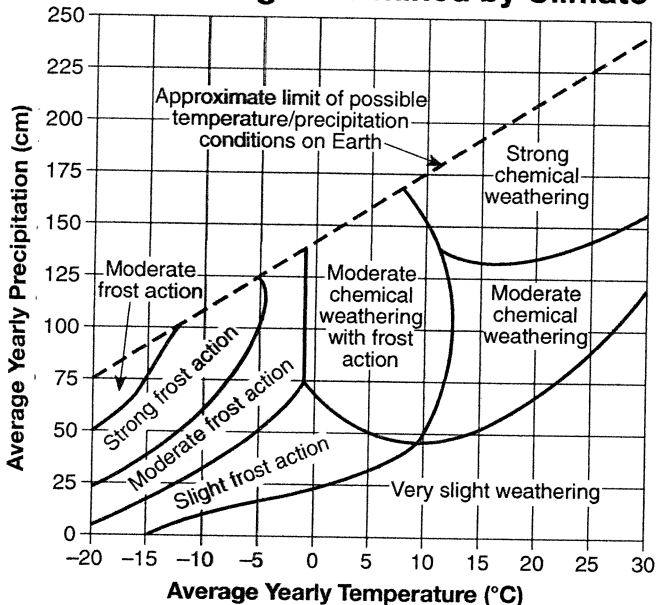


### Weathering and Climate

The type of weathering that dominates in an area depends on the climate in that area. Specifically, the major factors that control climate, and thus weathering, are precipitation and temperature. The graph below indicates the general relationship between precipitation, temperature and the type and rate of weathering.

**Weathering Determined by Climate**



1. What is the range of temperatures shown on this graph?

2. What is the range of yearly precipitation?

3. Weathering rates are described as:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

4. Determine the major type of weathering that occurs in Washington, D.C. if the average yearly temperature (AYT) is 13°C and the average yearly precipitation (AYP) is 111 cm.

5. The AYT in Albany, N.Y. is 9°C and the AYP is 98 cm. What is the major type of weathering that occurs in Albany?

6. What is the major difference, in terms of weathering type, between Washington, D.C. and Albany, N.Y.? What might explain this difference?

7. Phoenix, Arizona has an AYT of 20°C and an AYP of 22 cm. How would the climate of Phoenix have to change for moderate chemical weathering to become dominant?

8. According to the graph, no frost action occurs at an AYT above 13°C. What is a possible reason for this?

9. In general, what region of the country most likely experiences the greatest chemical weathering?

10. In general, what region of the county most likely experiences the greatest mechanical weathering?

11. In terms of climate, how does a region that experiences strong chemical weathering differ from a region that experiences strong mechanical weathering?

