

Name: _____

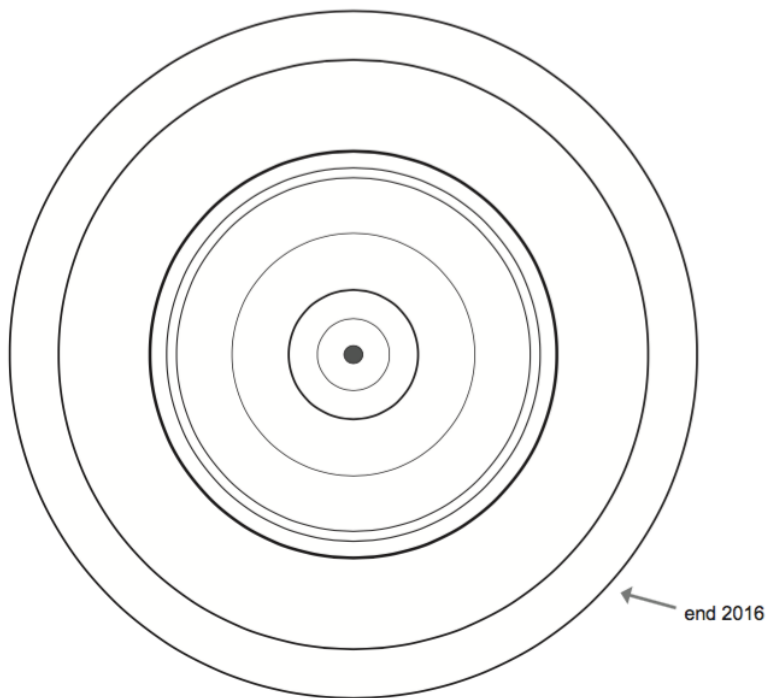
Period: _____

Tree Rings and Climate

In order to better understand today's climate, scientists attempt to gain a better picture of past climates. Understanding past climates can enable us to determine whether current climate changes are normal or extreme AND whether the current climate changes will drastically impact wildlife and human lifestyles.

Objective: Tree rings contain up to 10,000 years of annual information about climate, fire history, insect outbreaks, glacial movement, and other disturbances. Examine the years of tree-ring information below and see what patterns you can find!

Method: Measure (in centimeters) and record the width and yearly rainfall of each tree ring. **The tree rings are the white spaces between the lines!!** Think about what might cause variation in the tree-ring width.



* Count the small dark circle in the center as the first year of growth

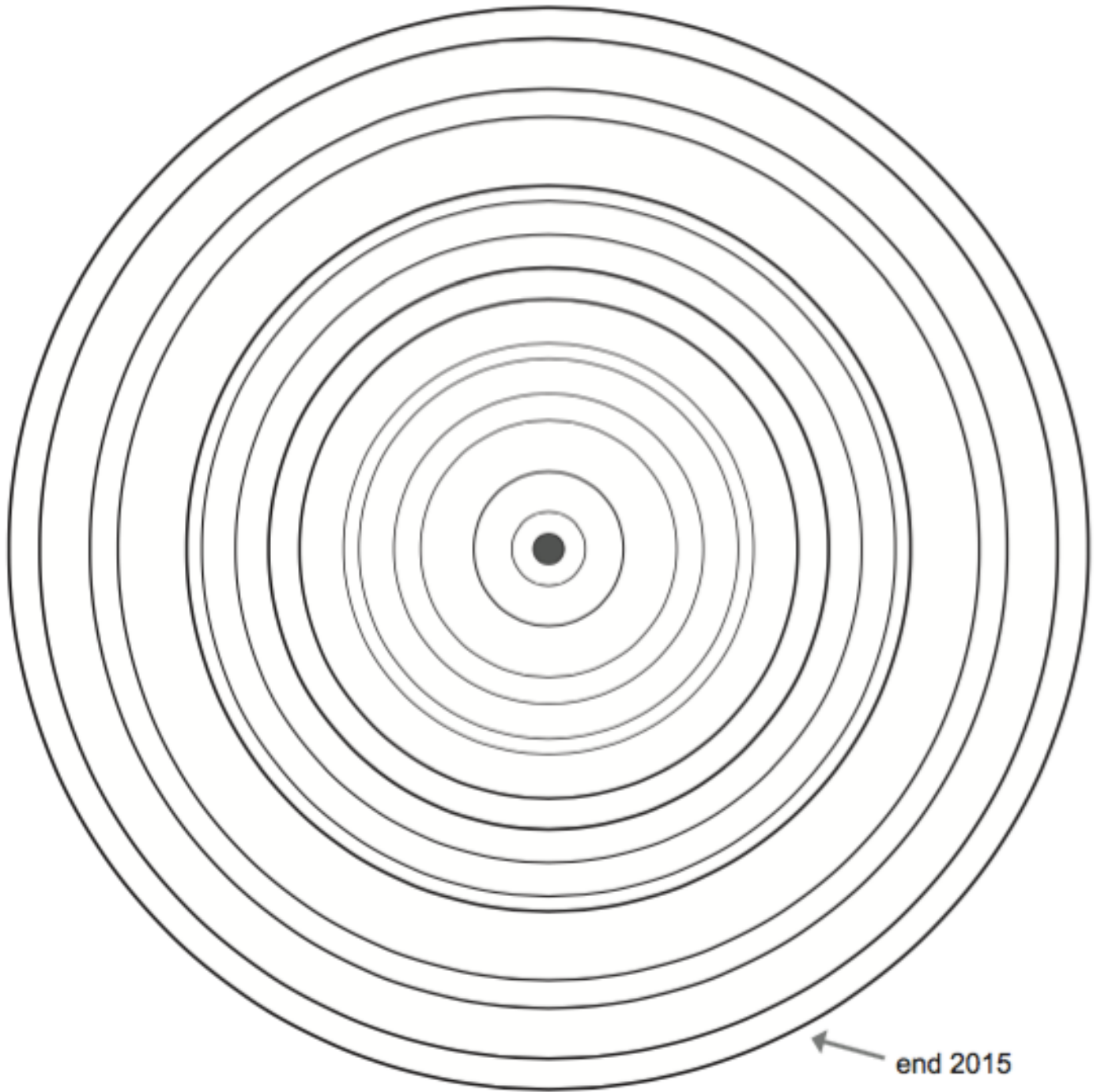
Data

Year	Ring width (cm)	Yearly rainfall (inches)
2016		

Answer the questions below based on the data table.

1. How old is this tree?
2. What year did the tree receive the most rainfall?
3. During what two years was there a drought?
4. What year did this tree start to grow?

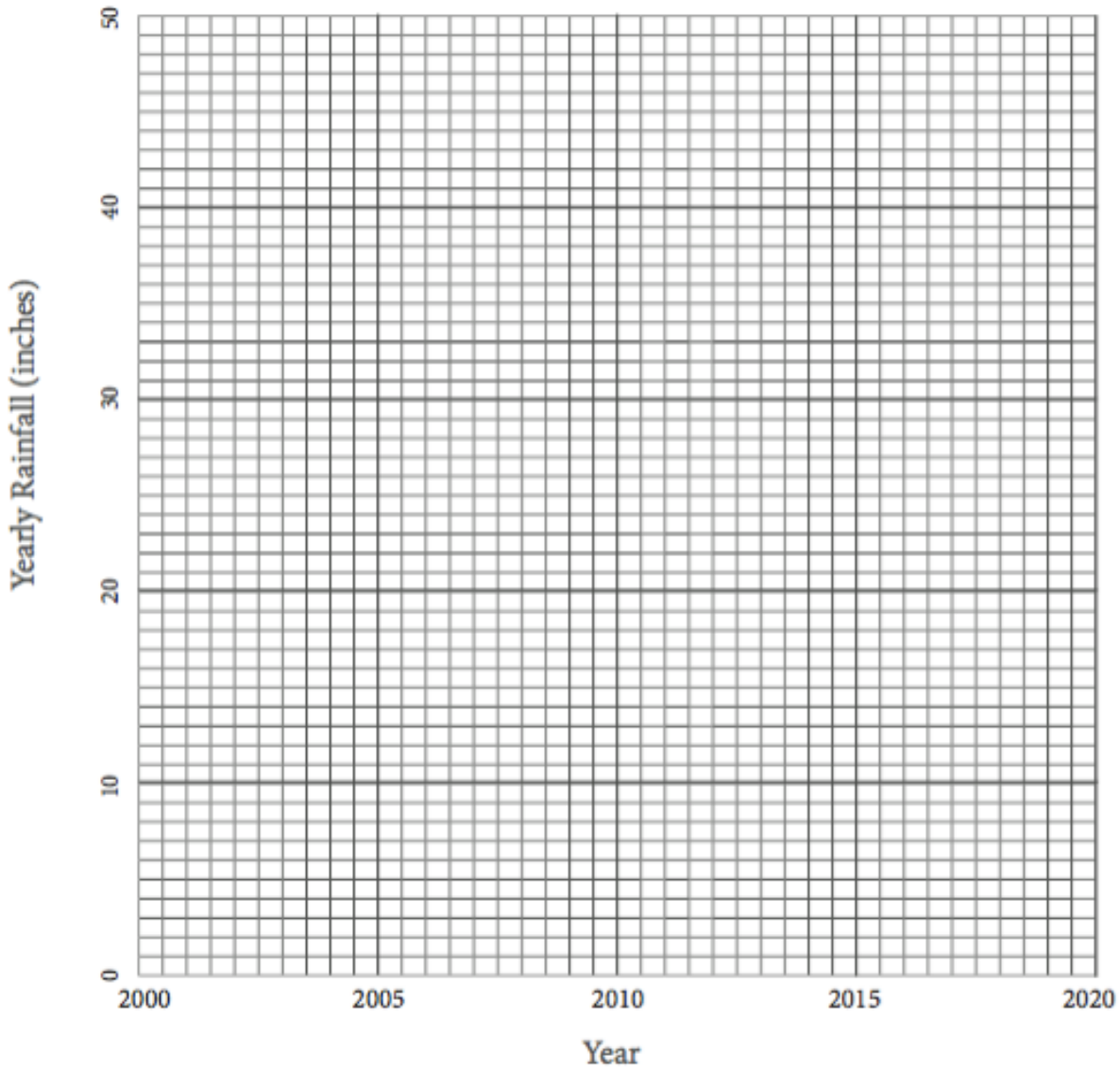
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Construct a line graph from the previous tree information.

Rainfall from Tree Rings



Analysis

Answer questions #1-2 based on the table below:

	Width of Ring (cm)			
	2013	2014	2015	2016
Cherry	3	4	3	5
Maple	4	6	4	6
Oak	2	3	2	1

1a. In which year did all the three trees grow the best? _____

1b. How do you know? _____

2. Why is the data in 2016 unusual? _____

Width of Ring and Rainfall

Ring Width (cm) Yearly Rainfall (inches)

0 to 0.1	2
0.1 to 0.2	7
0.2 to 0.3	11
0.3 to 0.4	16
0.4 to 0.5	20
0.5 to 0.6	24
0.6 to 0.7	28
0.7 to 0.8	33
0.8 to 0.9	38
0.9 to 1.0	42
1.0 to 1.1	46
1.1 to 1.2	50

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Note: Numbers are for simulation purposes only. They are not intended to be a reference source. The width of tree rings also depends on other environmental factors such as average temperature.