Exercise 4

- Using the measurements you used for Exercise 3 develop a rating using BARC. If the machine you are using does not have BARC installed you will have to download the program and install it. BARC can be found at:

http://wwwrcolka.cr.usgs.gov/uo/tft/bloving/barc/

Specifically:

1. If needed, use the BARC tutorial to become familiar with BARC
2. Enter the three measurements from Exercise #3:
    a. 6.00 feet, 10.0 cfs
    b. 8.65 feet, 100 cfs
    c. 29.0 feet, 2500 cfs
3. Using an offset of zero enter end points for "Rating A"
4. Go to the "Log-Rating Curve"page and inspect the rating
5. Copy the end point information from Rating A to Rating B
6. Enter a more appropriate offset for Rating B and inspect the log rating curve

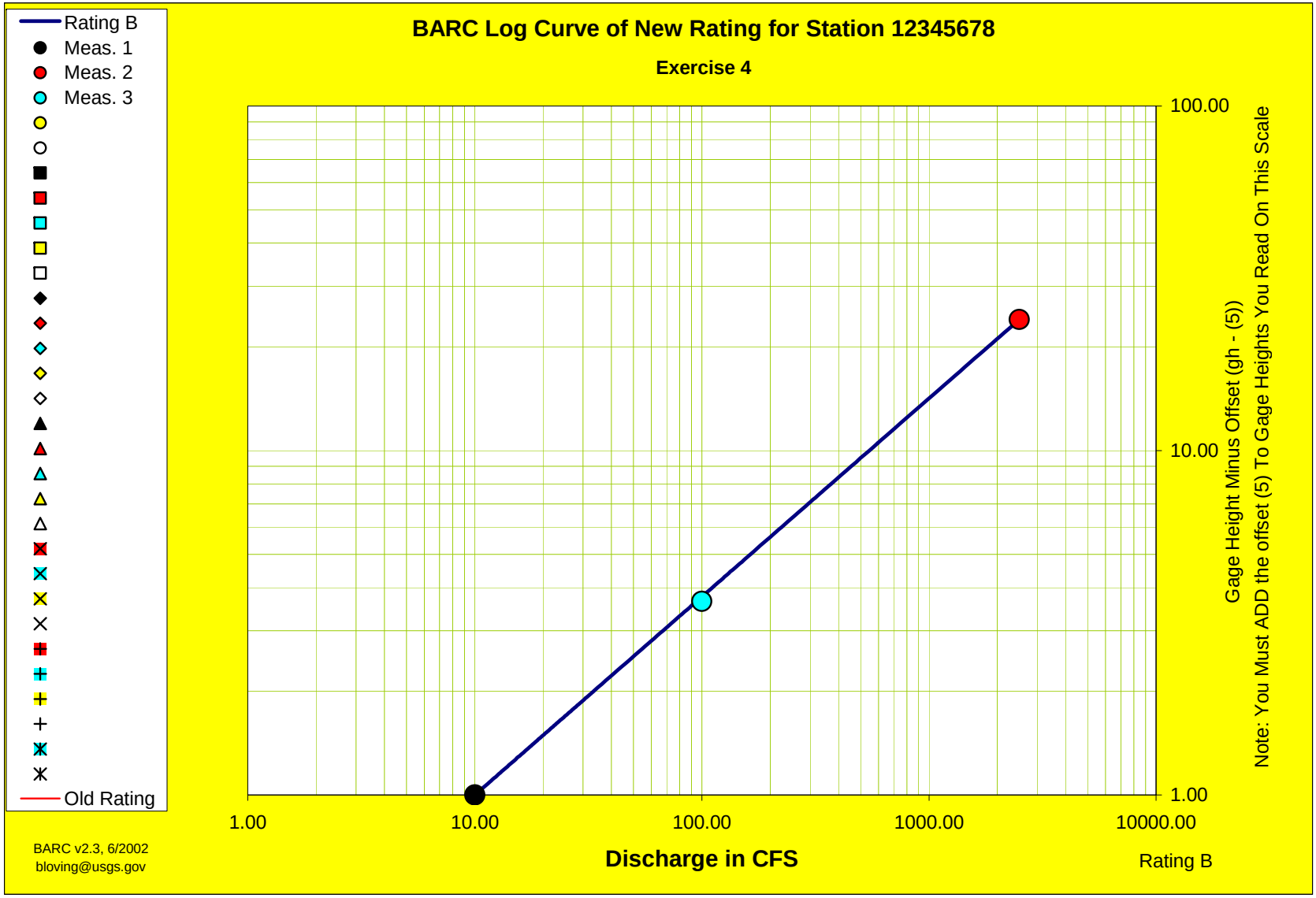
Briefly explain differences between Rating A and Rating B. Which curve is more appropriate and why: **Rating Curve B with an offset of 5 is more appropriate because it produces a straight line.**

A new rating for Station: 12345678
Exercise 4

	Copy to Rating C	Single Offset Breakpoint Ratings		
		Show	Show	Show
	Regression	Rating A	Rating B	Rating C
Enter the Rating Offset	1.38	0.00	5.00	
Enter the Low Endpoint Gage Height	6.00	6.00	6.00	
Enter the Low Endpoint Discharge	15.15	10	10	
Enter a Breakpoint Gage Height (Optional)				
Enter a Breakpoint Discharge (Optional)				
Enter the High Endpoint Gage Height	29.00	29.00	29.00	
Enter the High Endpoint Discharge	2879	2500	2500	
Sum of the Percent Differences		177.50	5.46	
Percent Difference Furthest From Zero		177.50	5.46	

Measurement Data

Use	Number	Gage Height	Discharge	Rated	Rating A % Diff.	Rating B % Diff.	Rating C % Diff.
☑	1	6	10	e	0.00	0.00	
☑	2	29	2500	e	0.00	0.00	
☑	3	8.65	100	e	177.50	5.46	
☑					0.00	0.00	
☑					0.00	0.00	


BARC Log Curve of New Rating for Station 12345678
Exercise 4
Rating B
Meas. 1
Meas. 2
Meas. 3
Old Rating
100.00
10.00
1.00
Gage Height Minus Offset (gh - (5))
Note: You Must ADD the offset (5) To Gage Heights You Read On This Scale
1.00
10.00
100.00
1000.00
10000.00
Discharge in CFS
Rating B
BARC v2.3, 6/2002
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