

Biology & Health – Blood Alcohol Content Graphing Activity

Name: _____ Period: _____

In this activity you will use your own body weight to graph your blood alcohol content for different number of drinks consumed over a varying amount of time. Please fill in the following information which will be necessary to determine the BAC (Blood Alcohol Content).

1. My Weight: _____ Divided by 2.2 = _____ kilograms
2. My Weight in Kilograms times (if boy .58) (if girl .49) = _____ Body Weight Factor
3. Now, Divide the number of drinks by the Body Weight Factor to get BAC

1 Drink = _____	2 Drinks = _____	3 Drinks = _____
4 Drinks = _____	5 Drinks = _____	6 Drinks = _____
7 Drinks = _____	8 Drinks = _____	9 Drinks = _____
10 Drinks = _____		

Finally, you “burn” off alcohol with time. To get your actual B.A.C. you need to subtract the amount of alcohol you have burned off with time from your BAC above. Use the figures below for each hour and record in the table below.

1 hour = .015 2 hours = .030 3 hours = .045 4 hours = .060 5 hours = .075
 6 hours = .090

4. Using the above information, calculate **your** BAC for each given level of number of drinks and the time spent drinking. Then, follow instructions below the chart and graph each hour of drinking.

Blood Alcohol Content for Given amounts of Drinks and Time Drinking

Hours Drinking	1 Drink	2 Drinks	3 Drinks	4 Drinks	5 Drinks	6 Drinks	7 Drinks	8 Drinks	9 Drinks	10 Drinks
1 - Blue										
2 - Red										
3 - Green										
4 - Black										
5 - Orange										
6 - Yellow										

Use the information from above to graph the BAC of your blood for each hour of drinking. Put BAC on the vertical axis and number of drinks on the horizontal axis. Use different colors (as specified in the chart) for Hours Drinking. Plot each data point in the proper color, and then connect all the dots of the same color. Staple both sheets together and turn in.

Example: A guy weighs 140 pounds. Step 1: $140 / 2.2 = 63.6$ Step 2: $63.6 \text{ times } .58 = 36.9$
 Step 3: $1 \text{ drink} / 36.9 (1 / 36.9) = .027$ Step 4: $.027 - 1 \text{ hour drinking } (.027 - .015) = .012$
 So, put .012 in the box for 1 drink and 1 hour drinking.