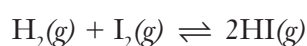


# NON-EQUILIBRIUM REACTION QUOTIENT

NAME \_\_\_\_\_

SECTION \_\_\_\_\_

1. The reaction



occurs in a 1.0 L container at a given temperature. Initially the concentration of  $[\text{H}_2]$  and  $[\text{I}_2]$  are both 0.350 M. In the table below are the results of 6 successive measurements where the concentration of each species in the reaction is provided.

Measurement #	$[\text{H}_2]$ (M)	$[\text{I}_2]$ (M)	$[\text{HI}]$ (M)	ratio $[\text{HI}]^2/[\text{H}_2][\text{I}_2]$
1	0.350	0.350	0	0
2	0.255	0.255	0.190	
3	0.155	0.155	0.390	
4	0.0900	0.0900	0.520	
5	0.0775	0.0775	0.545	
6	0.0775	0.0775	0.545	

Calculate the magnitude of the reaction quotient,  $\frac{[\text{HI}]^2}{[\text{H}_2][\text{I}_2]}$  for each measurement and enter the value into the appropriate cell in the table above. (Show at least one of the calculations here.)

- a. What is happening to the value of the reaction quotient moving from Exp. #1 to Exp. #5?



