Vega

Vega is the **option's price sensitivity to changes in the implied volatility of the asset**. For example if Alice buys a call with an IV of 40% and $2.00 of vega. If the IV increases to 41%, Alice's option value will increase by $2.00. Vega risk is extremely important to assess and understand when trading options, the next section illustrates why.

I bought a call and the asset price increased, why am I losing money?

More often than not, the culprit is **vega**. A common misconception is that if you buy a call and the price of the asset goes up, you will make money (vice versa with a put). There are often times where traders buy a call for an asset with a relatively high IV, and are taken aback when they lose money if the asset price grinds up slowly. For example, if a trader buys an option with 100% IV (implying ~5% per move per day) and the asset moves up 0.50% for 3 days in a row, they could end up losing money if the market decides that the asset's IV should really be 80%. This would result in a reduction in the option's value of approximately 20 * optionVega. If this drop is larger than the effect of the spot price increase, the trader will lose money.