$$E + S \rightleftarrows E \cdot S \stackrel{k_{cat}}{\to} E + P$$

$$V = k_{cat}[E]_T \frac{[S]}{K_M + [S]} = k_{cat}[E]_T \frac{1}{1 + K_M/[S]}$$

- 1. What will V be for [S] = 0?
- 2. What will V be for $[S] \gg K_M$?
- 3. What will V be for $[S] = K_M$?
- 4. In the space below, sketch your best guess for the shape of a V vs [S]. Put [S] on the x-axis, V on the y-axis.

5. Can you find and label K_M and k_{cat} on your curve?