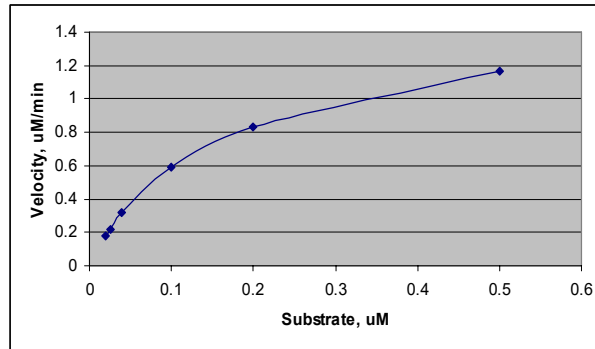Cheryl Coolidge

Critical thinking questions:

1. You cannot determine V_{max} or Km from this data as V_{max} clearly has not been reached.

1. $y = mx + b$

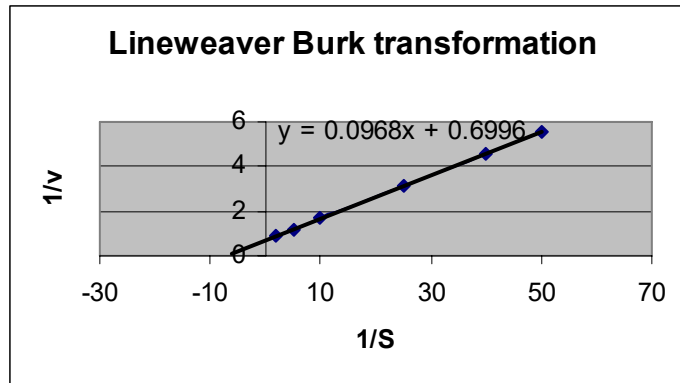2. The slope is m; the y intercept is b.

3. The y term is $\dfrac{1}{v}$.

4. The x term is $\dfrac{1}{[S]}$.

5. The y intercept is $\dfrac{1}{V \max}$.

6. The slope is $\dfrac{Km}{V \max}$.

Lineweaver Burk transformation

1. Take the reciprocal of 1/0.6996 to get V_{max}: 1/0.6996 = 1.43.

2. The slope has a value of 0.0968. You know V_{max} from above so solve for Km:

   $$0.0968 = Km/1.43; \ Km = 0.138$$

3. $\dfrac{1}{[S]} = -\dfrac{1}{Km}$

4. The x intercept appears to be about -7. Take the reciprocal and change the sign to get Km. So Km = 0.142, which agrees well with the answer obtained in question 2.