**STUDENT NAME:**

**Watch the** [**Ted-Ed**](https://www.youtube.com/watch?v=hRnrIpUMyZQ) **video (4:40) and** [**Osmosis**](https://www.youtube.com/watch?v=fIIJmg_1hv0) **video (until 2:35) and answer the following questions.**

1. What is the function (job) of a red blood cell? What protein helps them to complete this function?

2. What causes the sickle shape of the red blood cells? Are they permanently sickled?

3. What complications does this new shape present for patients?

4. Why is sickle cell disease also called sickle cell anemia? What is anemia?

5. Are there treatments for sickle cell?

6. What is the inheritance pattern for this disease?

a. X linked

b. Autosomal recessive

c. Autosomal dominant

d. Y linked

7. Carriers of sickle cell can still exhibit symptoms of the disease under extreme conditions. We know this is because some of their cells, though not all, undergo sickling. Based on this information, which of the following best describes the dominance pattern for sickle cell disease?

a. Incomplete dominance

b. Dominant/recessive

c. Codominant

d. Polygenic inheritance

