Pre-Activity Reading Assessment

Part 1

1. What are the causes of type 1 diabetes?

2. What are the causes of type 2 diabetes?

3. Name two risk factors for type 1 diabetes.

4. Name two risk factors for type 2 diabetes.

5. Name one complication from type 1 diabetes.

6. Name two complications from type 2 diabetes.

7. In your words, define "machine learning."

Part 2

8. List some examples of how machine learning can be used. Include examples from the reading and at least one example of your own.

9. Complete each cell in the table below by providing an explanation. "Reinforcement Learning" has been completed as an example.

Type of Machine Learning	Type of Machine Learning Problem	Example
Supervised Learning	Classification Regression	
Unsupervised Learning	Clustering Association	
Reinforcement Learning Learns by interacting with its environment	Agent receives reward when performing a desired outcome and a penalty for performing incorrectly. Through many simulations, the agent learns to maximize its reward and minimize its penalty without interaction from humans.	IBM Deep Blue AI beats reigning world chess champion in 1997. OpenAI Five defeats Dota 2 world champions becoming thefirst AI to beat the world champions in an esports game in 2019.

10. What type of machine learning problem would predict whether a patient has diabetes and why?