Reading Assignment – Weapons of Math Destruction: Ch 1

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**Objective:** Evaluate student understanding and critical thinking skills by answering guide questions based on a book chapter.

**Instructions:** Read the assigned book chapter thoroughly and answer the following guide questions. Be sure to provide specific examples from the text to support your answers.

**Title:** Weapons of Math Destruction by Cathy O’Neil

**Chapter/s:** Chapter 1

**Guide Questions:**

1. **Briefly summarize the main ideas presented in the chapter. What are the key points the author is trying to convey?**

The author, Cathy O'Neil, narrates her transition from academia to the finance industry, specifically to a hedge fund called D.E. Shaw. She highlights the power of mathematics in the finance industry and the secretive nature of the work to prevent knowledge from being taken to competitors.

1. **Describe the author's writing style. Is it clear, engaging, and easy to understand? Provide examples to support your opinion.**

O'Neil's writing style is clear and engaging. She uses personal anecdotes to make complex financial concepts accessible to readers. For example, she describes her work environment at Shaw in a way that is easy for non-finance professionals to understand.

1. **Identify any new terms or concepts introduced in the chapter. Define them and explain their significance to the chapter's main ideas.**

The author introduces the concept of a hedge fund and the role of mathematicians (or "quants") within this industry. A hedge fund is a type of investment vehicle that pools capital from accredited individuals or institutional investors and invests in a variety of assets. Quants use mathematical and statistical methods to develop models for trading and investment.

1. **Discuss the evidence or examples provided by the author to support their arguments. Are they convincing and relevant? Explain your reasoning.**

The author uses her personal experience working at D.E. Shaw as evidence. She describes the work environment, the role of mathematics, and the secretive nature of the work. These examples are relevant and convincing as they provide a firsthand account of the industry.

1. **Were there any areas in the chapter that you found confusing or difficult to understand? If so, describe those areas and explain why they were challenging.**

The chapter is generally clear, but readers unfamiliar with finance or mathematics might find some concepts challenging. The secretive nature of the work and the compartmentalization of information could also be difficult to grasp without a background in corporate security or finance.

1. **Identify any potential biases or assumptions the author may have made in presenting their ideas. How might these biases or assumptions affect the credibility of the chapter?**

The author assumes that the reader has a basic understanding of finance and mathematics. This could potentially affect the credibility of the chapter for readers who are not familiar with these fields.

1. **Compare the ideas presented in this chapter to those in previous chapters or other materials you have read on the topic. Are there any similarities or differences? Explain your observations.**

As this chapter is the first chapter of the book, and this is the first time I read such a topic, I currently do not have any ideas to compare it to.

1. **What questions or concerns do you have after reading this chapter? Are there any topics you would like to explore further?**

Readers might want to know more about the specific mathematical models used in hedge funds and how they impact financial decisions. They might also be curious about the ethical implications of the secretive nature of the work.

1. **How do the ideas presented in the chapter relate to your own experiences, beliefs, or opinions? Provide examples to illustrate the connections.**

The ideas presented in the chapter relate to my own experiences, beliefs, and opinions in a few ways. For example, I have seen firsthand how the use of algorithms can have a negative impact on people's lives. I have also seen how algorithms can be used to perpetuate bias and discrimination.

1. **Summarize your overall impression of the chapter. Do you agree or disagree with the author's main arguments? Why or why not?**

The chapter provides an engaging and insightful look into the world of hedge funds and the role of mathematics within this industry. Whether one agrees or disagrees with the author's perspective would depend on their own experiences and beliefs about the finance industry and the use of mathematics within it.

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