

# Unit 5 Individual Challenge Problem

## (SITUATION \_\_\_\_)

(TEXTBOOK PG 218-219)

This problem presents you with an opportunity to investigate complex, interesting problems over several days. The purpose is to focus on the process of solving complex problems. You will be evaluated on your ability to show, explain, and justify your work and thoughts. Save all your work, including what does not work in order to write about the processes you used to reach your answer.

In this activity, you will apply what you know about linear situations. The information in each question, parts (a) through (e), describes a different situation. All of the situations are linear. That is, when they are graphed, they are lines.

You will be assigned ONE situation. Based on the given information, use your findings as evidence to answer the question in the problem. Show your answer completely and explain your strategies for answering the question.

\*These problems are challenging and you may make several false starts before finding a process that works!! Don't give up!

## Completion of a Challenge Problem includes SIX parts:

1. **Problem Statement (\_\_\_\_/2 pts):** State the problem clearly in your own words so that anyone reading your paper will understand the problem you intend to solve.
2. **The Plan (\_\_\_\_/3 pts):** Brainstorm possible ways to solve your problem. Think about the concepts we have studied in the past and how they can be applied to your problem. Then make a list of the important steps you plan to use to find a solution.
3. **Process and Solutions (\_\_\_\_/8 pts):** Work your problem. Add diagrams, tables, graphs, equations if needed. You are not limited to a single strategy. Clearly state your final solution in sentence form. It is fine to include things that did not work and changes you made along the way. *If you did not complete this problem, describe what you do know and where and why you are stuck.*
4. **Reflection (\_\_\_\_/10 pts):** Reflect on your learning and your reaction to the problem. Describe (in written form) in detail your thinking and reasoning as you worked from start to finish. Explain your solution and how you know it is correct. What mathematics did you learn from it? What did you learn about your math problem solving strategies? This reflection should be an EXPOSITORY paragraph, where facts and other relevant details are arranged in a logical order to help the reader understand.
5. **Legibility (\_\_\_\_/2pts):** You are sharing your knowledge and solving strategies with others. Please make sure all of your work is legible and in pencil. A typed reflection is optional, but a paper copy is required.
6. **Attached work:** Include ALL your work and notes. Your scratch work is important because it is a record of your thinking. Do not throw anything away.

**THIS PAPER MUST BE STAPLED AS THE COVER SHEET TO YOUR SUBMISSION.**