

UNIT 4 Project

Demonstrate your knowledge by giving clear, concise solutions to each problem. Be sure to include all relevant drawings and justify your answers (show all your work). You may show your solution in more than one way to investigate beyond the requirements of the problem. (21 pts)

1. a. Tell how you know that a system of linear equations has no solutions. **(3 pts)**
- b. Write a system of two linear equations that has no solution. **(3 pts)**
- c. Tell how you know that a system of two linear equations has more than one solution. How many solutions will such a system have? Justify your answer. **(3 pts)**
- d. Write a system of two linear equations that has more than one solution. **(3 pts)**
- e. Write a system of linear equations that has only one solution. **(3 pts)**
- f. Solve the system of equations in part e in at least two ways. **(3 pts)**
- g. Write a word problem that can be solved using a system of two linear equations. Solve the problem and give the meaning of the answer. **(3 pts)**