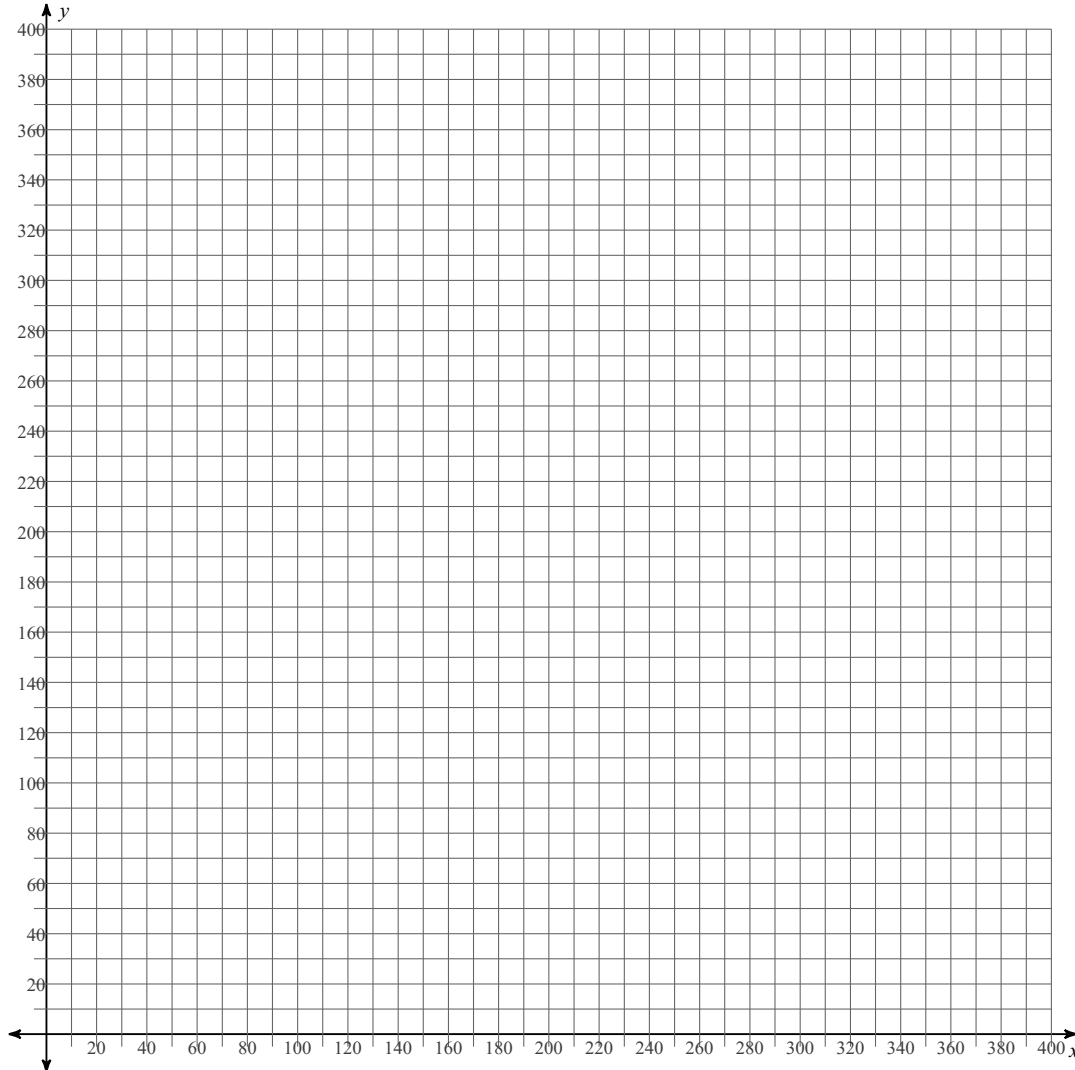


## Module 4 Lesson 4 Assignment

**Write a system of inequalities to model the scenario. Then graph the system.**

- 1) A drama club is selling tickets to the spring musical. The auditorium holds 200 people. Tickets cost \$12 at the door and \$8.50 if purchased in advance. The drama club has a goal of selling at least \$1000 worth of tickets to Saturday's show.

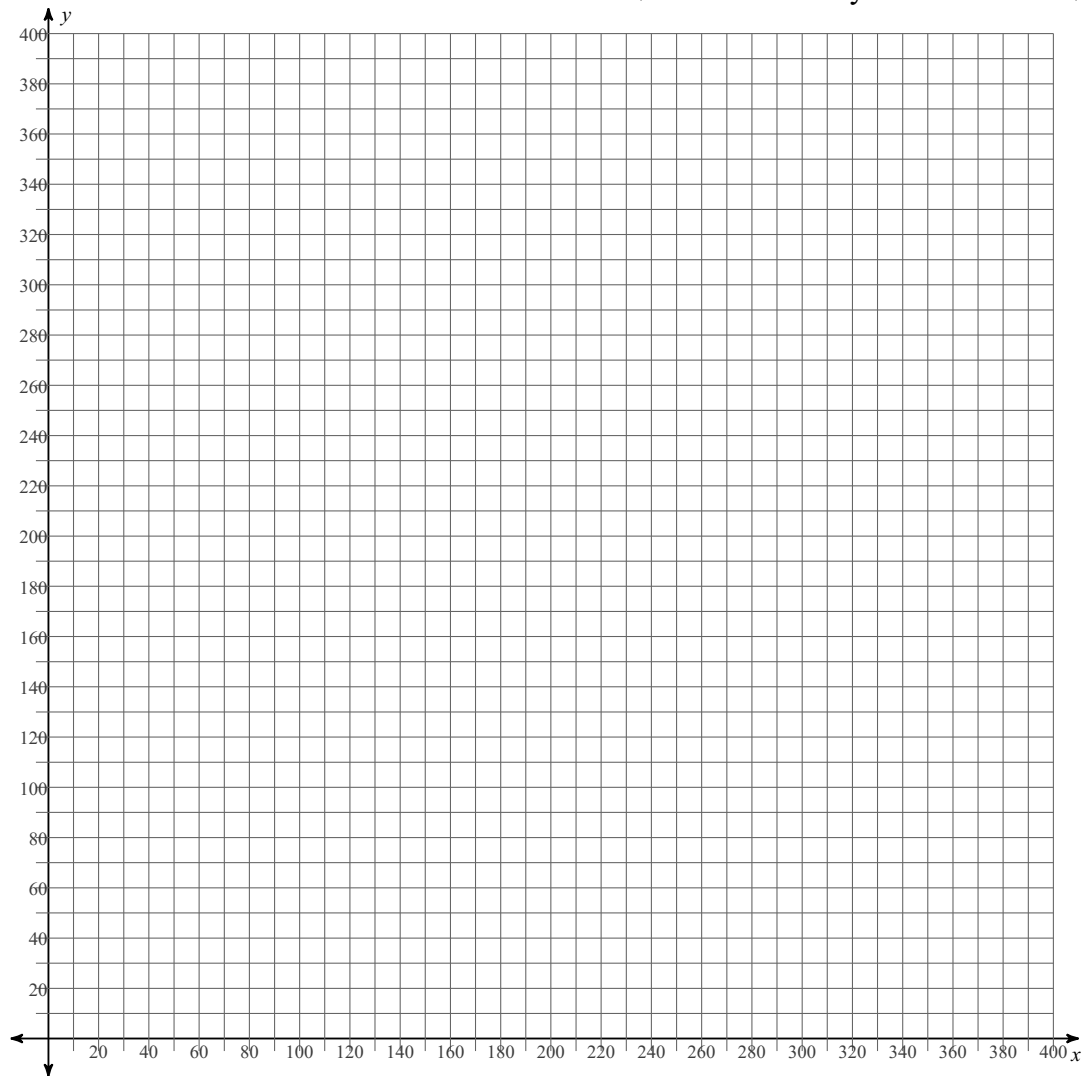


**Based on your graph of the previous problem, answer the question.**

- 2) If 50 tickets are sold in advance, what is the minimum number of tickets that must be sold at the door so that the club meets its goal? Justify your answer.

**Write a system of inequalities to model the scenario. Then graph the system.**

- 3) The girls soccer team is doing a fundraiser for new soccer uniforms. They need to raise at least \$2,000. A local merchant has promised to donate up to 150 plain and deluxe t-shirts to help the team with their fundraiser. Plain t-shirts sell for \$8 each and fancy t-shirts sell for \$12 each.

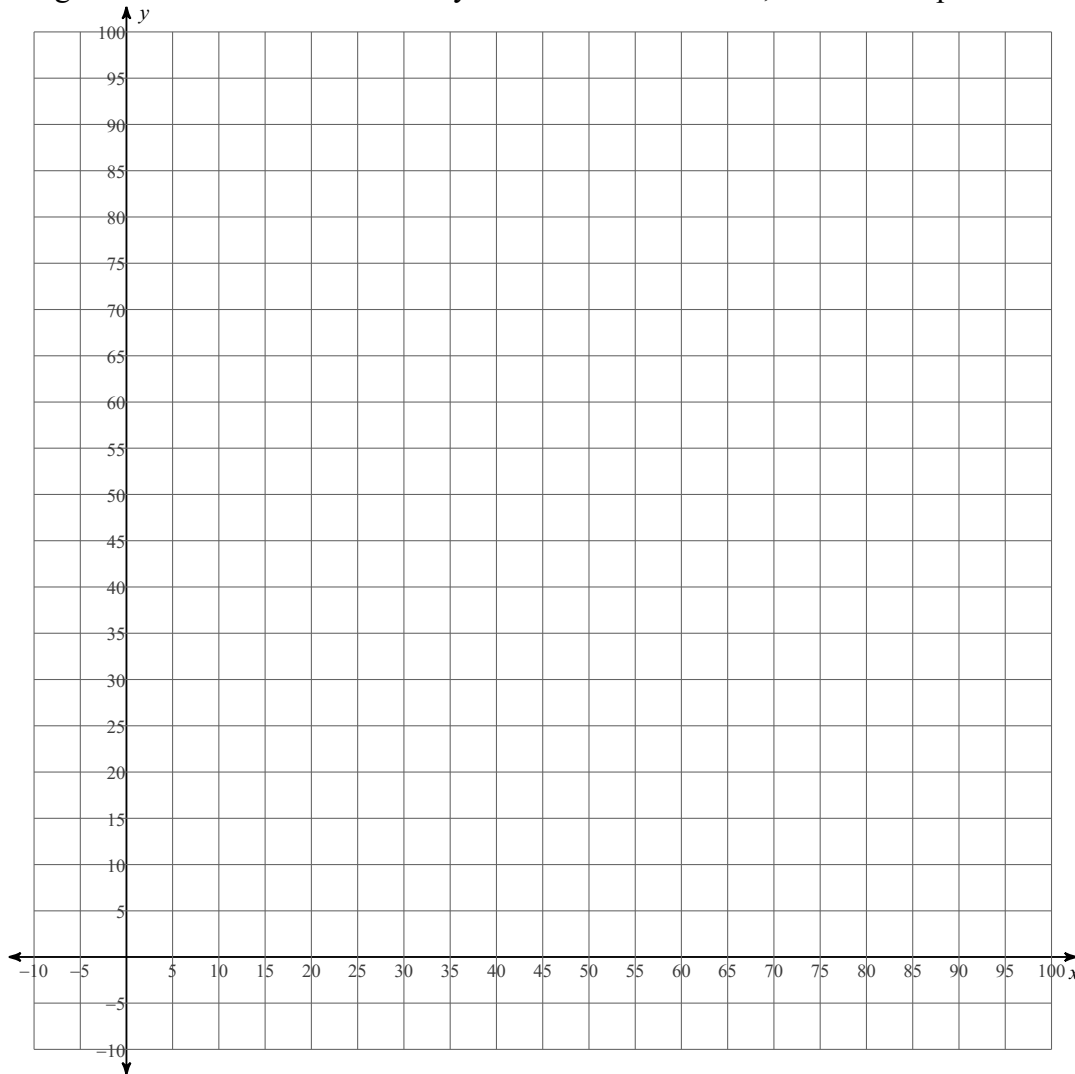


**Based on your graph of the previous problem, answer the question.**

- 4) Can the team sell 120 plain and no fancy t-shirts and meet their goal? Justify your answer.

**Write a system of inequalities to model the scenario. Then graph the system.**

- 5) Dr. Steve is going to Sal's Diner to buy sandwiches. A small sandwich costs \$3.50 and larger hoagie costs \$5.00. He needs to buy at least 20 sandwiches, and he can spend no more than \$88.

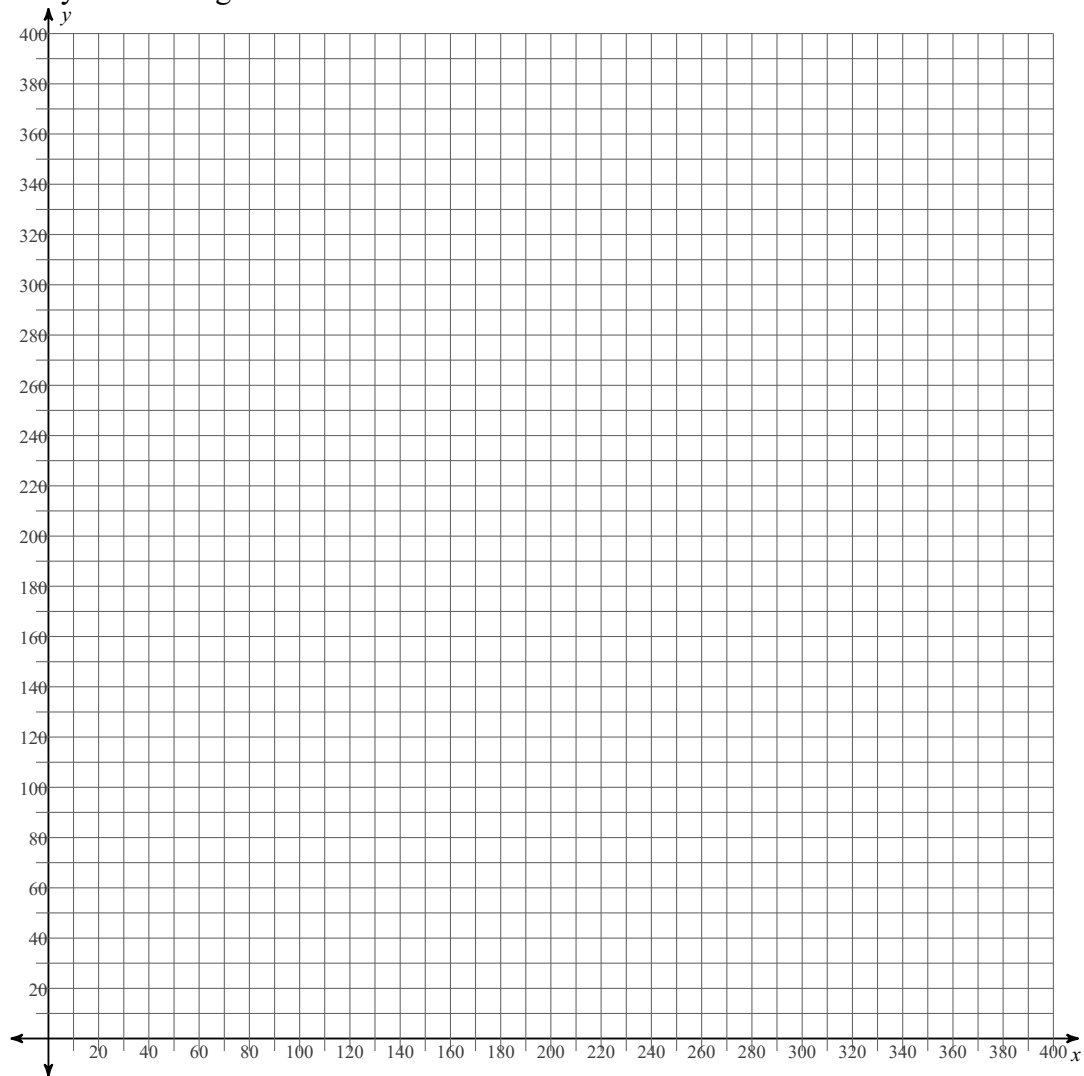


**Based on your graph of the previous problem, answer the question.**

- 6) Can Dr. Steve buy 10 of each type of sandwich? Justify your answer.

**Write a system of inequalities to model the scenario. Then graph the system.**

- 7) The senior spirit committee is selling food to raise money for the prom. They need to raise at least \$500. A deluxe meal with dessert costs \$10. A sandwich meal with potato chips costs \$5. They have enough food to sell at most 100 meals.

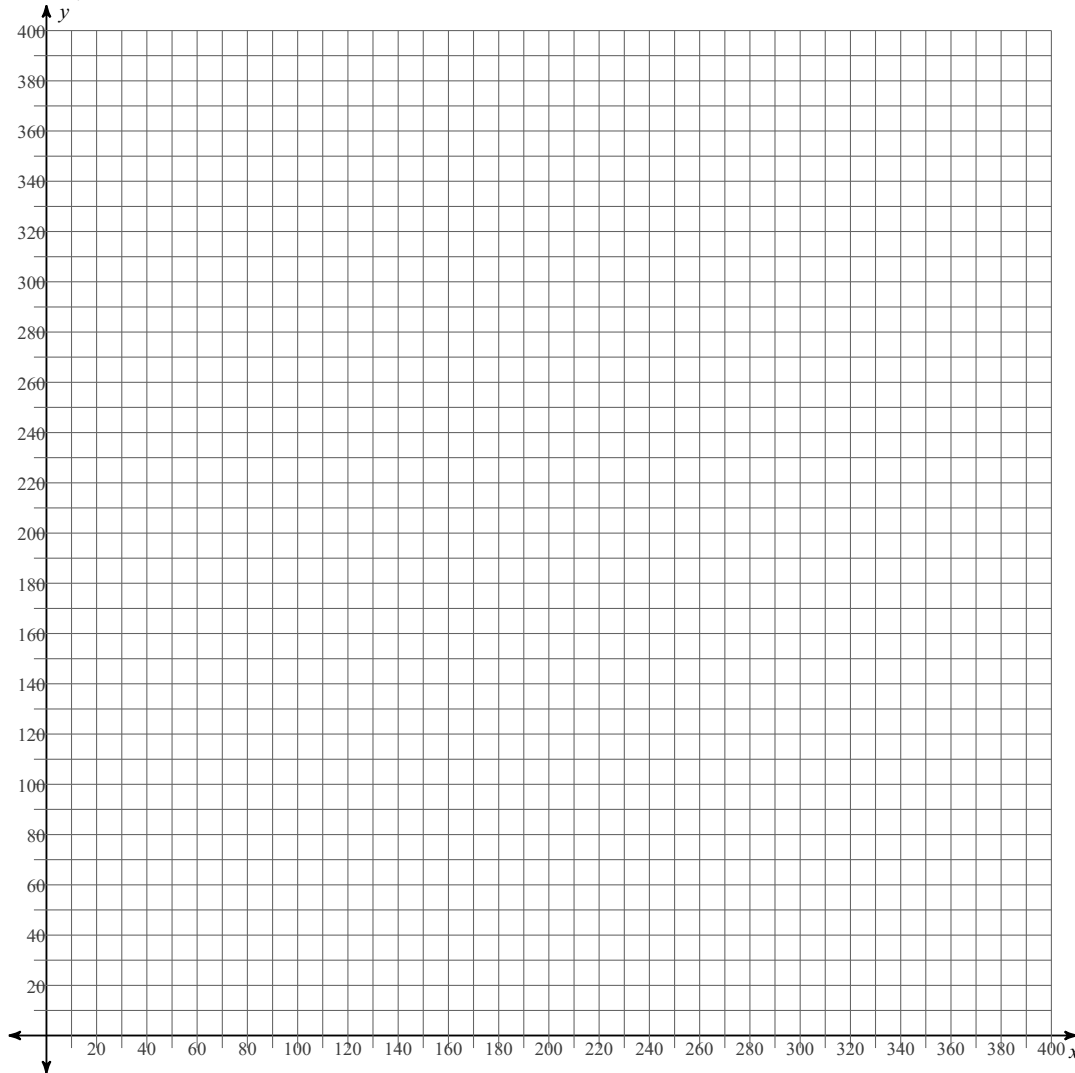


**Based on your graph of the previous problem, answer the question.**

- 8) Can the committee sell 80 deluxe meal with dessert and no sandwich meals and meet the goal? Justify your answer.

**Write a system of inequalities to model the scenario. Then graph the system.**

- 9) Jordan works for a landscape company during his summer vacation. He is paid \$12 per hour for mowing lawns and \$14 per hour for planting gardens. He can work a maximum of 40 hours per week, and would like to earn at least \$250 this week.

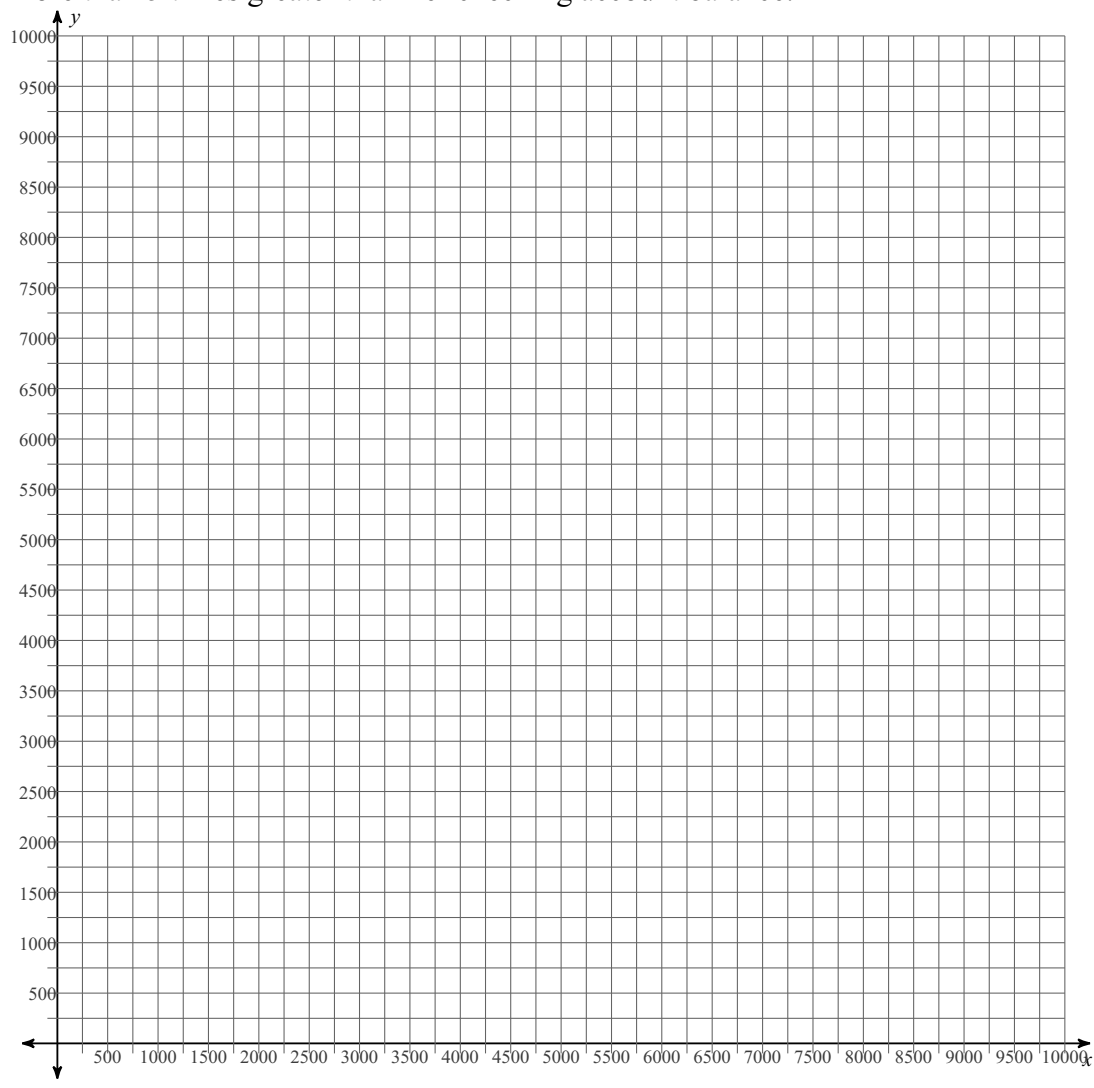


**Based on your graph of the previous problem, answer the question.**

- 10) Can Jordan spend his entire week only mowing lawns and meet his goal? Justify your answer.

**Write a system of inequalities to model the scenario. Then graph the system.**

- 11) Nazmun has at least \$5,000 in a savings account at the bank. Her savings account balance is more than 5 times greater than her checking account balance.



**Based on your graph of the previous problem, answer the question.**

- 12) Is it possible that Nazmun has only \$1 in her checking account? Justify your answer.