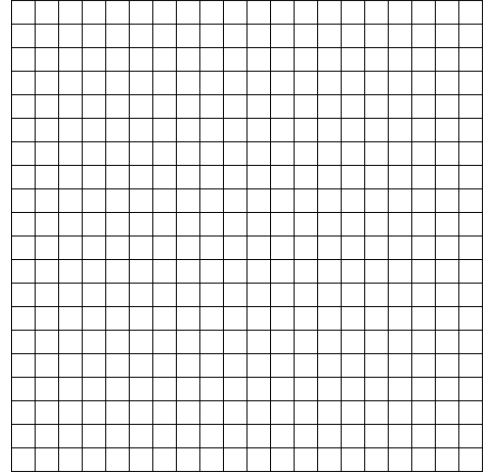
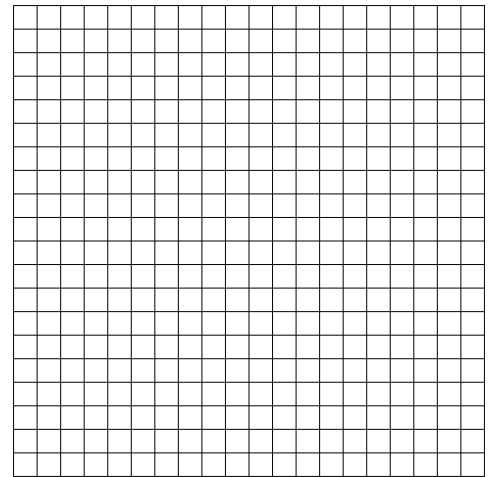


Systems of Inequalities: Word Problems

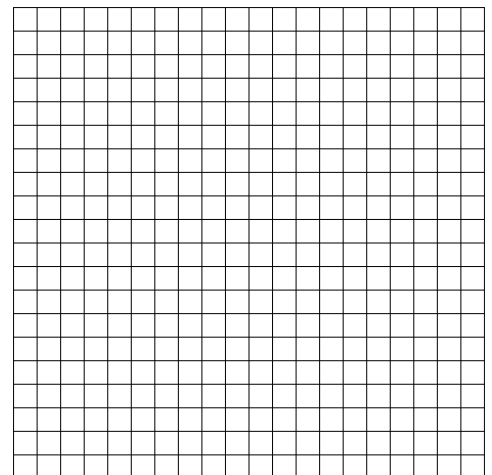
1. Katie has \$50 in a savings account at the beginning of the summer. She wants to have at least \$20 in the account by the end of the summer. She withdraws \$2 each week for food, clothes, and movie tickets. Write an inequality that expresses Katie's situation and display it on the graph below. For how many weeks can Katie withdraw money?



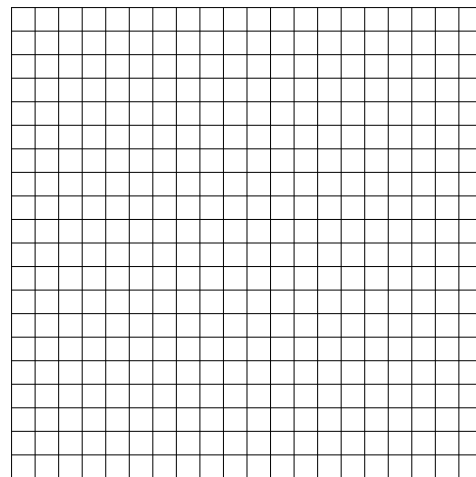
2. Skate Land charges a \$50 flat fee for a birthday party rental and \$4 for each person. Joann has no more than \$100 to budget for her party. Write an inequality that models her situation and display it on the graph below. How many people can attend Joann's party?



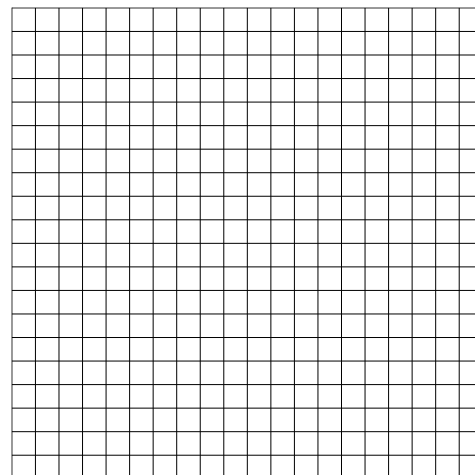
3. Sarah is selling bracelets and earrings to make money for summer vacation. The bracelets cost \$2 and the earrings cost \$3. She needs to make at least \$60. Sarah knows she will sell more than 10 bracelets. Write inequalities to represent the income from jewelry sold and number of bracelets sold.



4. Jason is buying wings and hot dogs for a party. One package of wings costs \$8. Hot dogs cost \$5 per pound. He must spend less than \$40. Jason knows he will be buying at least 4 pound of hot dogs. Write a system of inequalities to model the situation. Graph both inequalities and shade the intersection.

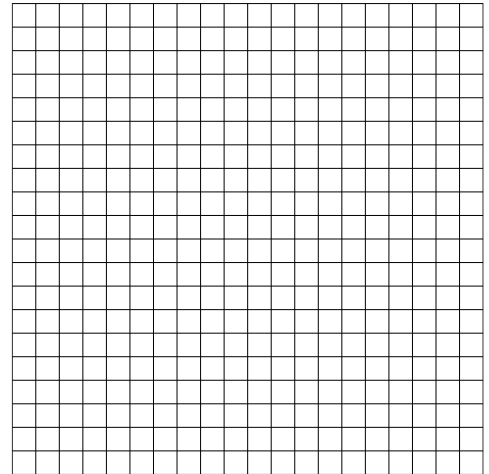


5. The boys and girls soccer clubs are trying to raise money for new uniforms. The boys' soccer club is selling cars for \$2 per piece and the girls' soccer club is selling candles for \$4. They must raise more than \$800. The girls expect to sell at least 100 candles. Write a system of inequalities to model the situation. Graph both inequalities and shade the intersection.

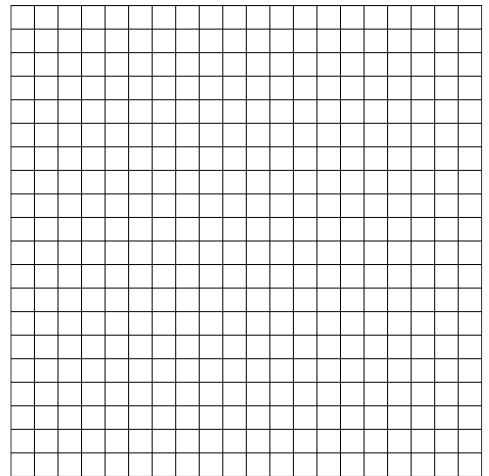


Systems of Inequalities: Word Problems

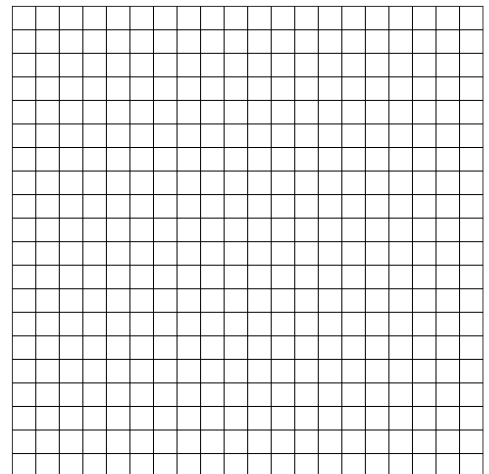
6. You can work at most 25 hours next week. You need to earn at least \$85 to cover your gas and food expenses. Your babysitting job pays \$7.50 per hour and your math tutoring job pays \$6 per hour. Write a system of linear inequalities to model the situation and then solve.



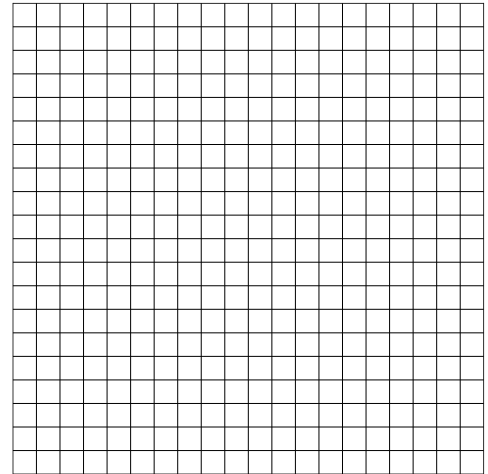
7. Mandy is buying plants and soil for a flowerbed for her mom. The soil costs \$5 per bag and the plants cost \$12 each. She wants to buy at least 6 plants and can spend no more than \$100. Write a system of linear inequalities to model the situation and then solve.



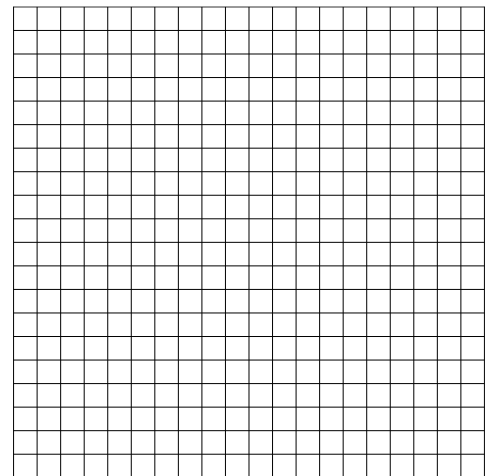
8. Josh is going to the store to buy candy. Bags of candy corn cost \$3 and bags of chocolate cost \$5. He needs to buy at least 20 bags of candy and he cannot spend more than \$60. Write a system of linear inequalities to model the situation and then solve.



9. Jenny is packing dishes into boxes. Each box can hold either 15 small plates or 8 large plates. She needs to pack at least 9 boxes and at least 150 plates. Write a system of linear inequalities to model the situation and then solve.



10. The band is selling boxes of fruit to raise money for new uniforms. Boxes of oranges cost \$12 per box and boxes of grapefruits cost \$15 per box. To get free shipping on all of the fruit each band member must sell at least 25 boxes of fruit. In order to meet your goal, you want to sell at least \$500 worth of fruit. Write a system of linear inequalities to model the situation and then solve.



Systems of Inequalities: Word Problems

Key Words for Solving Inequalities		
$y =$ <ul style="list-style-type: none">• Is equal to• Is/are/were/will be/yields	$y >$ <ul style="list-style-type: none">• Is greater than• Is more than• Exceeds• Is over• Is above• Is larger than• Is longer than• Is higher than• Is older than	$y \geq$ <ul style="list-style-type: none">• Is greater than or equal to• Is at least• Is not less than• Is not under• Has minimum value
$y \neq$ <ul style="list-style-type: none">• Is not equal to• Is not the same as• Is different from	$y <$ <ul style="list-style-type: none">• Is less than• Is under• Is fewer than• Is smaller than• Is below• Is shorter than• Is beneath• Is lower than	$y \leq$ <ul style="list-style-type: none">• Is less than or equal to• Is at most• Is not greater than• Does not exceed• Has maximum value• Is no more than