

## Systems of Inequalities: Word Problems Practice

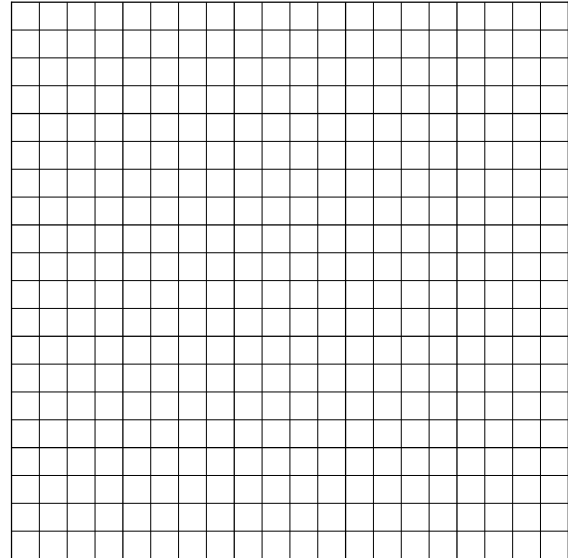
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1. Sarah is selling bracelets and earrings to make money for summer vacation. The bracelets cost \$2 and the earrings cost \$3. She needs to make at least \$60. Sarah knows she will sell more than 10 bracelets.

a. What does  $x$  represent? What does  $y$  represent?

b. Write inequalities to represent the income from jewelry sold and number of bracelets sold.

c. Graph the inequalities.



d. List 3 solutions to the system that allows Sarah reach her sales goal.

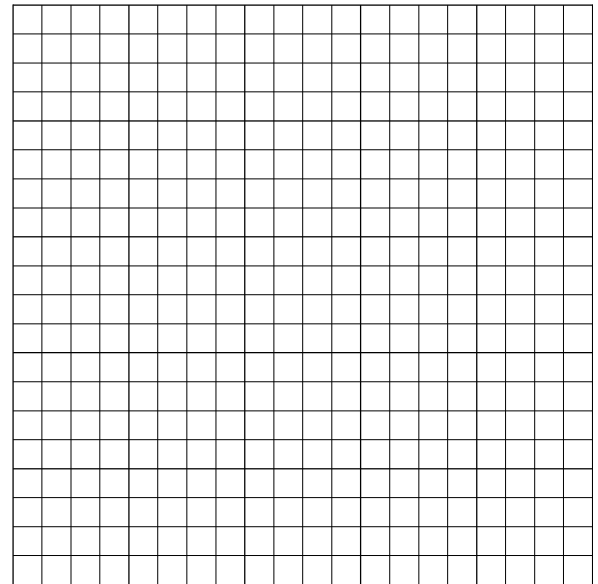
2. Jason is buying wings and hot dogs for a party. One package of wings costs \$8. Hot dogs cost \$5 per pound. He must spend less than \$40. Jason knows he will be buying at least 4 pound of hot dogs.

a. What does  $x$  represent? What does  $y$  represent?

b. Write a system of inequalities to model the situation.

c. Graph both inequalities.

d. List 3 solutions to the system that stay within budget.



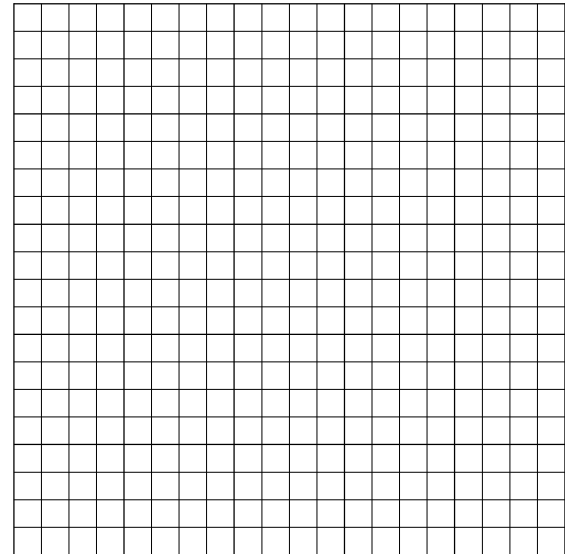
3. The area of a parking lot is 600 square meters. A car requires 6 meters of space and a bus requires 30 meters of space to park. The attendant can handle no more than 60 vehicles at a time.

a. What does  $x$  represent? What does  $y$  represent?

b. Write a system of inequalities to model the situation.

c. Graph both inequalities.

d. List 3 solutions to the system.



4. A farmer has a field of 70 acres in which he plants potatoes and corn. The seed for potatoes cost \$20 per acre, the seed for corn costs \$60 per acre and the farmer has set aside \$3000 to spend on seed.

a. What does  $x$  represent? What does  $y$  represent?

b. Write a system of inequalities to model the situation.

c. Graph both inequalities.

d. List 3 solutions to the system.

