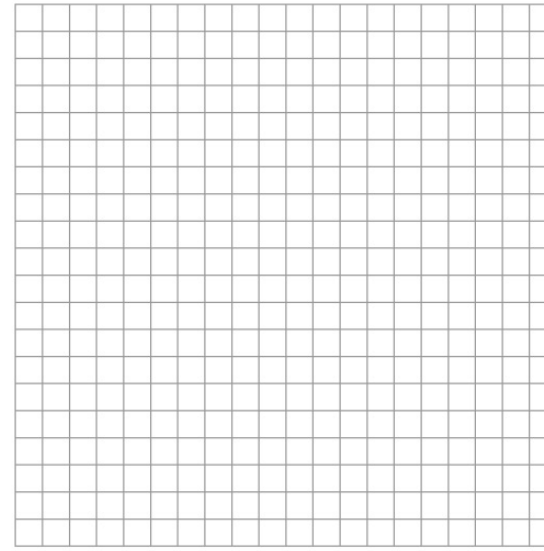
Name : _____

MATH MONKS

Systems of Inequalities Word Problems

1 Peter's pet store never has more than a combined total of 20 rabbits and dogs. The store also never has more than 8 rabbits. How many of each type of pet do they have at the pet store? Use the graph to write the system of linear inequalities. Identify and intercept the solution.

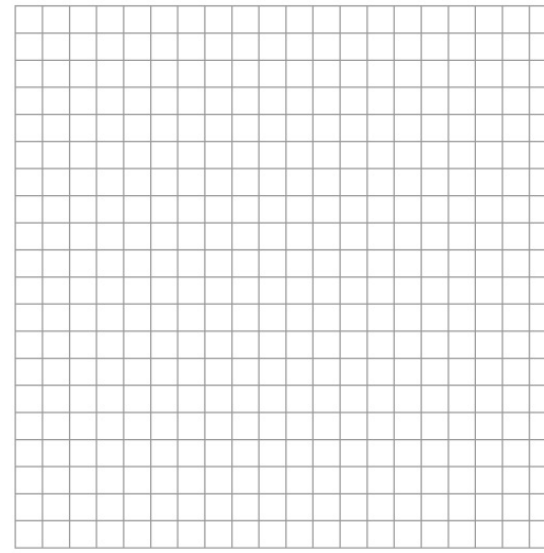


2 Jason is buying wings and hot dogs for a party. One package of wings cost $7. Hot dogs cost $5 per package. He must spend no more than $40.

a Write an inequality to represent the cost of Jason's food for the party.

b Jason will be buying at least 5 packages of hot dogs. Write an inequality to represent this solution.

c Graph both inequalities. Find two points to determine the number of wings and hot dogs he should buy.



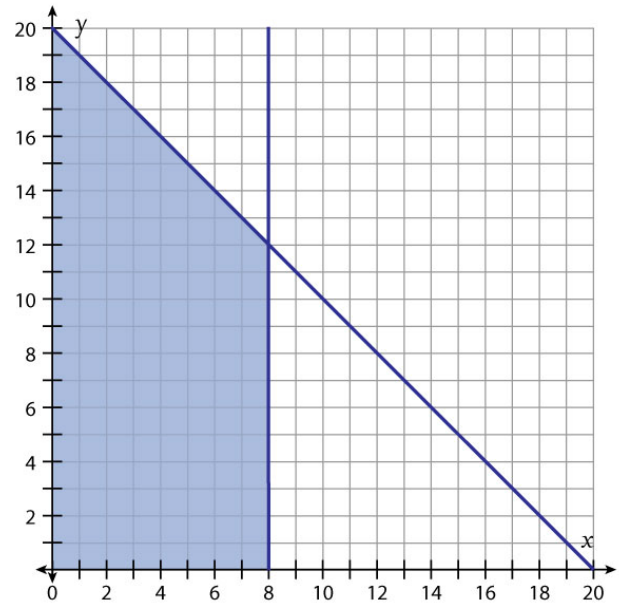
Name : _____

MATH MONKS

Systems of Inequalities Word Problems

Answers

1 Peter's pet store never has more than a combined total of 20 rabbits and dogs. The store also never has more than 8 rabbits. How many of each type of pet do they have at the pet store? Use the graph to write the system of linear inequalities. Identify and intercept the solution.



Ans: $x \leq 8$ and $x + y \leq 20$

2 Jason is buying wings and hot dogs for a party. One package of wings cost $7. Hot dogs cost $5 per package. He must spend no more than $40.

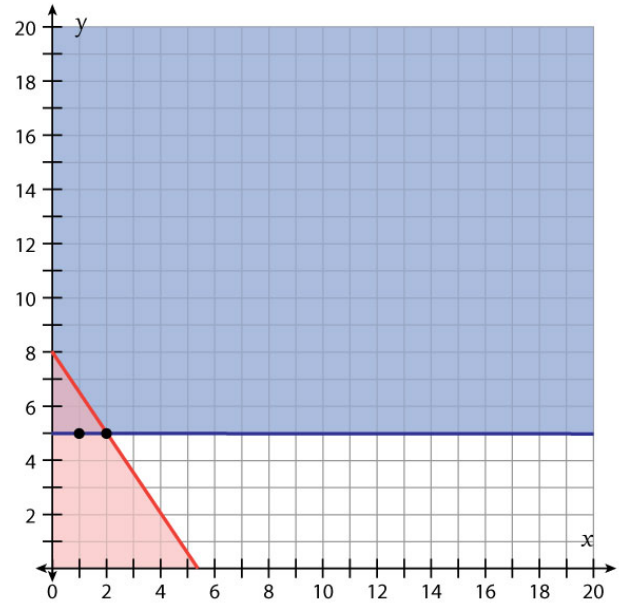
a Write an inequality to represent the cost of Jason's food for the party.

Ans: $7x + 5y \leq 40$

b Jason will be buying at least 5 packages of hot dogs. Write an inequality to represent this solution.

Ans: $7x + 5y \leq 40$ and $y \geq 5$

c Graph both inequalities. Find two points to determine the number of wings and hot dogs he should buy.



Ans: Jason has two options for buying wings and hot dogs.
Option – 1 : (1, 5) 1 package wings and 5 packages of hot dogs.
Option – 2 : (2, 5) 2 packages wings and 5 packages of hot dogs.