Name : _____

MATH MONKS

Graphing Linear Inequalities Word Problems

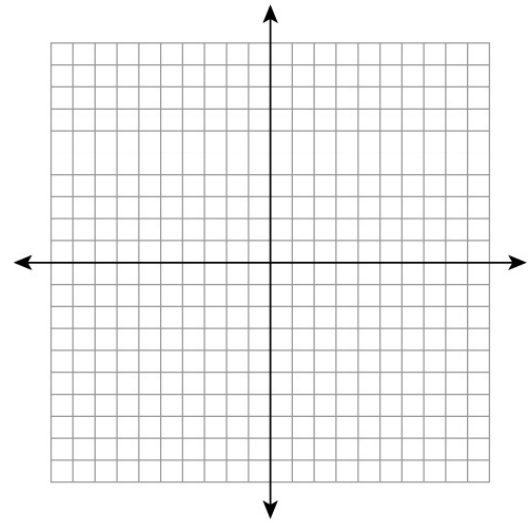
Solve each problem and represent the inequality in the graph.

1 Sara is buying wings and hot dogs for a party. One package of wings costs $7. Hot dogs cost $4 per pound. If she must spend less than $40.

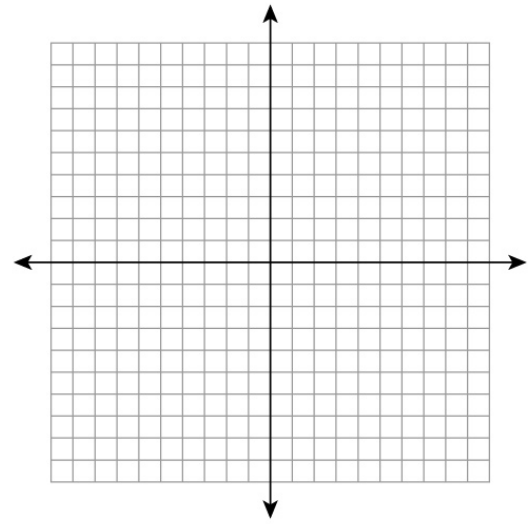
a) Write an inequality representing the cost.

b) Write an inequality showing the condition if Sara buys at least 5 pounds of hot dogs.

c) Graph the system of inequalities and find how many package of wings and how many package of hotdogs can she buy at most?



2 You and your friend take turns driving a car. You drive at 70 miles per hour and your friend drives at 60 miles per hour. Together you want to drive less than 15 hours and at least 600 miles per day. Your friend will drive longer than you. How many hours can you and your friend drive per day?



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Answers

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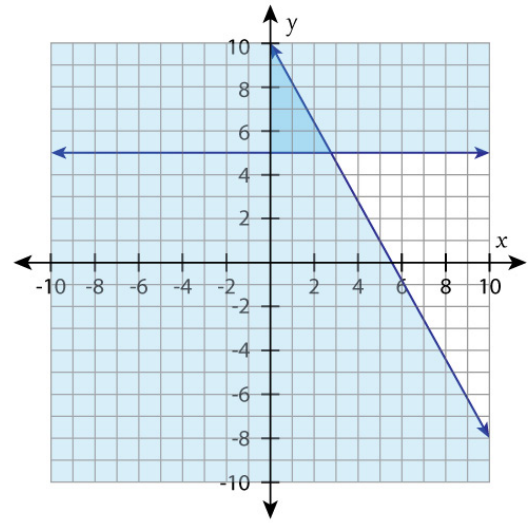
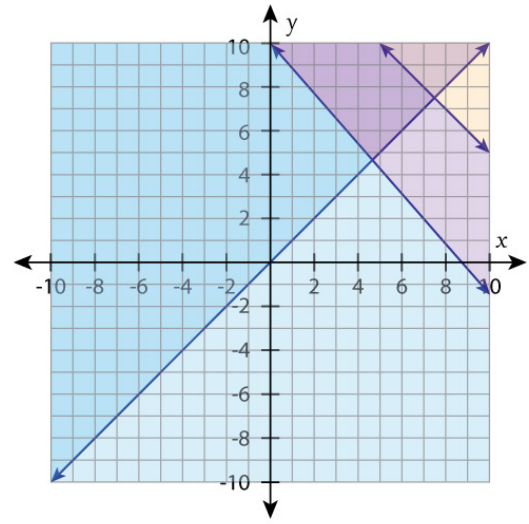


Ans: a) $7x + 4y < 40$
b) $y \geq 5$
c) Sara can buy 1 package of wings and 6 pounds of hot dogs at most.

2 You and your friend take turns driving a car. You drive at 70 miles per hour and your friend drives at 60 miles per hour. Together you want to drive less than 15 hours and at least 600 miles per day. Your friend will drive longer than you. How many hours can you and your friend drive per day?



Ans: 0 hours/day and 10 hours/day