

You are going to Wheeler's first home football game. A ticket is \$6 and then you want to buy some hot dogs and drinks. Hot dogs are \$3 and drinks are \$2. You have \$30 to spend at the game.

Q1: Write an inequality that represents your situation. Use "x" for hot dogs and "y" for drinks.

$$6 + 3x + 2y \leq 30$$

Spend

Q2. If you bought 3 hot dogs, how many drinks could you buy? How much money would you have left over?

$$6 + 3(3) + 2y \leq 30$$

$$6 + 9 + 2y \leq 30$$

$$15 + 2y \leq 30$$

$$\begin{array}{r} -15 \\ \hline 2y \leq 15 \\ \hline y \leq 7.5 \end{array}$$

I can buy 7 drinks. \$1 left over

Q3. If you bought 5 drinks, how many hot dogs could you buy? How much money would you have left over?

$$6 + 3x + 2(5) \leq 30$$

$$6 + 3x + 10 \leq 30$$

$$16 + 3x \leq 30$$

$$\begin{array}{r} -16 \\ \hline 3x \leq 14 \\ \hline x \leq 4.7 \end{array}$$

I can buy 4 hot dogs. \$2 left over.

Q4: Solve your inequality for y.
Graph your inequality on the coordinate plane.

$$y \leq -\frac{3}{2}x + 12$$

$$6 + 3x + 2y \leq 30$$

$$\begin{array}{r} +6 \\ \hline 3x + 2y \leq 24 \\ -3x \\ \hline 2y \leq -3x + 24 \\ \hline y \leq -\frac{3}{2}x + \frac{24}{2} \end{array}$$

Q5. Based on your graph, what are 2 situations that would use all of your money?

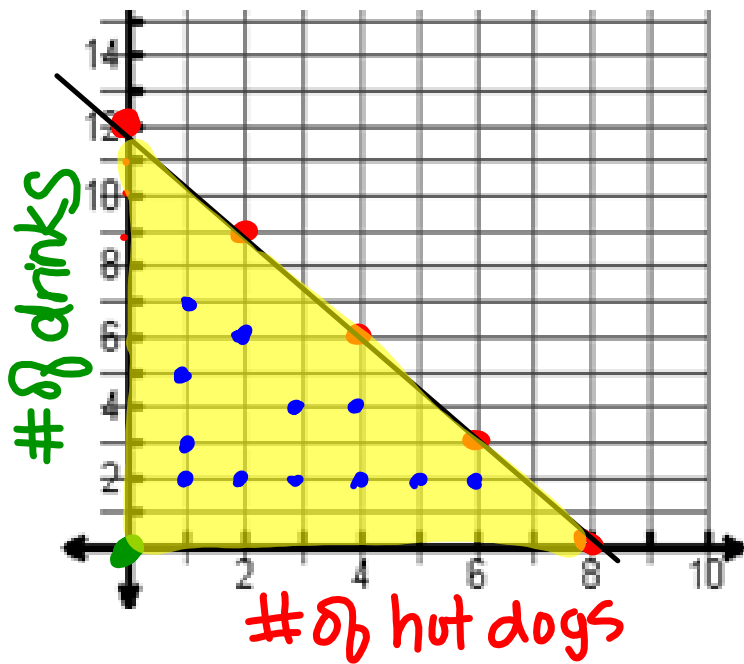
8 hot dogs, 0 drinks
2 hot dogs, 9 drinks

Q6. What is the maximum number of hot dogs you could buy?

8

Q7: What is the maximum number of drinks you could buy?

12



$$y \leq -\frac{3}{2}x + 12$$
$$0 \leq -\frac{3}{2}(0) + 12$$
$$0 \leq 12 \quad \text{T}$$