



From the graph, equilibrium
is at: $x=30$
the units and the supply
function is:

$$2x \rightarrow 3y = 0$$

Consider the following system:

$$\begin{cases} \frac{3}{4}x + \frac{5}{2}y = 11 & | \times 4 \\ \frac{1}{16}x - \frac{3}{4}y = -1 & | \times 16 \end{cases}$$

$$\begin{aligned} 3x + 10y &= 44 \\ (x - 12y &= -16) \times 3 \end{aligned}$$

$$\begin{aligned} 3x + 10(2) &= 44 & \text{ } \circledast x=8 \\ 3x + 20 &= 44 & \text{ } \\ -20 & -20 & \text{ } \\ \frac{3x}{3} &= \frac{24}{3} & \text{ } \end{aligned}$$

$$\begin{aligned} 3x + 10y &= 44 \\ -3x + 36y &= 48 \\ \hline & 46y = 92 \\ & \frac{46y}{46} = \frac{92}{46} \\ & \circledast y=2 \end{aligned}$$

- A. $(0, \frac{22}{5})$
- B. $(8, 2)$
- C. $(0, \frac{4}{3})$
- D. $(2, 8)$

Margaritas is a very popular restaurant. Occasionally, the restaurant provides lunch and/or dinner for a local charity house. Each lunch costs \$6.50. Each dinner costs \$10.25. The restaurant's expenses for providing the meals ~~cannot exceed \$1,183.00 per trimester.~~ equals \$675

If x represents the number of lunches and y represents the number of dinners, How many of each meal was provided if a total of 75 meals were provided.

$$(L + D = 75) - 6.50$$

$$6.50L + 10.25D = 675$$

$$\begin{array}{r}
 -6.50L - 6.50D = -487.50 \\
 (+) \quad 6.50L + 10.25D = 675 \\
 \hline
 \quad \quad 3.75D = 187.50 \\
 \quad \quad \underline{3.75} \quad \underline{3.75} \\
 \quad \quad \quad D = 50
 \end{array}$$

50 dinners
25 lunches

You can only work up to 45 hours a week total at your two jobs. Working at the golf course pays \$8 per hour and working at the airport pays \$10. You need to earn at least \$380 each week in order to cover your expenses for the week.

Which of the following is the system of inequalities that models this problem if you used x for the golf course job and y for the airport job?

A.

$$\begin{aligned}x + 10y &\leq 45 \\ 8x + y &\geq 380\end{aligned}$$

B.

$$\begin{aligned}8x + y &\leq 45 \\ x + 10y &\geq 380\end{aligned}$$

C.

$$\begin{aligned}x + y &\geq 45 \\ 8x + 10y &\leq 380\end{aligned}$$

D.

$$\begin{aligned}x + y &\leq 45 \\ 8x + 10y &\geq 380\end{aligned}$$

$$x + y \leq 45$$

