

# Solving Linear Systems- Word Problems



## Overview of problems



*Example Set: A*

*A number is 10 more than 4 times another number. The sum of the two numbers is 160. What are the numbers?*



*Example Set: B*

*A truck and car depart two cities 390 miles apart at 1:00pm. They get on the same highway and travel towards one another. The car is traveling 30 mph faster than the truck. At 4:00pm they pass each other on the highway- what speed is each traveling?*



### Example Set: C

*The length of a rectangle is twice its width. If the length is increased by 4 inches and the width is decreased by 1 inch the new perimeter is 42 inches. What are the original dimensions of the rectangle?*



### Example Set: D

*Jeremy and Joshua are moving out of their college dorm and need some boxes. They go to Office Depot and look for sales on boxes. They can buy 5 medium and 10 large boxes for \$29 or 10 medium and 12 large boxes for \$42. What is the cost of each type of box?*

# Solving Linear Systems- Word Problems



## Overview of problems- KEY



*Example Set: A*

*A number is 10 more than 4 times another number. The sum of the two numbers is 160. What are the numbers?*

*130, 30*



*Example Set: B*

*A truck and car depart two cities 390 miles apart at 1:00pm. They get on the same highway and travel towards one another. The car is traveling 30 mph faster than the truck. At 4:00pm they pass each other on the highway- what speed is each traveling?*

*car - 80 mph*

*truck - 50 mph*



### Example Set: C

*The length of a rectangle is twice its width. If the length is increased by 4 inches and the width is decreased by 1 inch the new perimeter is 42 inches. What are the original dimensions of the rectangle?*

$$6'' \times 12''$$



### Example Set: D

*Jeremy and Joshua are moving out of their college dorm and need some boxes. They go to Office Depot and look for sales on boxes. They can buy 5 medium and 10 large boxes for \$29 or 10 medium and 12 large boxes for \$42. What is the cost of each type of box?*

$$\text{medium} - \$1.80$$

$$\text{large} - \$2.00$$