Solving Word Problems

About These Problems

Word Problems are some of the most difficult forms of math problems on any standardized tests. The key is to ignore the words and only focus on the numbers and reduce the problem to something you have seen before. Relating it to something you are familiar with is another tactic. The best way to overcome a fear of word problem is through practice.

Question. SpeedAway Rental Car company has a set amount of motorcycles and a set amount of cars in their fleet. The total number of vehicles they own is 100. On Saturday 50% of their motorcycles were rented out and only 30% of their cars. 30 vehicles were rented out on Saturday. How many motorcycles were rented out?

1. motorcycles = 80 cars =20
2. motorcycles = 70 cars = 30
3. motorcycles = 49 cars = 51
4. motorcycles = 60 cars = 40
5. motorcycles = 50 cars = 50

Answer. 5: This looks eerily similar to our systems of equations problems. Lets assign x to be the number of motorcycles and y to be the number of cars.

$$x + y = 100$$
$$0.5x + 0.1y = 30$$

Subtract one equation from another by multiplying the second equation by 2 to make the x coefficients equal.

$$x + y = 100$$
$$x + 0.2y = 60$$

$$0.8y = 40$$
$$y = 50$$

$$x + y = 50$$
$$x = 50$$