

Systems of Equations - Difficult Problems #2!

You may use (and will probably need) a calculator for these problems!

1. Michael is filling two tanks with slop for his hogs. He starts them both at the same time. The first starts with 10.3 gallons, and fills at a rate of 2.3 gallons/minute. The second starts at 15.13 gallons, and fills at a rate of 1.6 gallons/minute. When will the tanks have the same amount of slop?

2. Sam is considering renting from two different car companies. Snertz is \$33.50 and adds \$0.10 per mile. Fenterprise is \$20.50 and adds \$0.06 per mile. For how many miles will the cost be the same? If he plans to drive 500 miles, which company should he rent from?

3. Sadiki is mixing two different acid solutions together to get 20 liters. He is mixing a 10% acid solution with a 25% glucose solution and needs to get 20 liters of 12% solution. How many liters of each solution should Sadiki mix?

4. Bryce has a total of \$5,000 to invest in both CD's and T-bills. If CD's earn 2% per year, and T-bills earn 5% per year, and Bryce wants \$150 in interest per year, how much of each should she buy?

5. Iris is mixing peanuts and walnuts together. If peanuts cost \$2.50 per pound, and walnuts cost \$4.00 per pound, and she wants to have 50 pounds that she can sell at \$3.00 per pound, how much of each should she mix?

6. Malcolm has 48 coins in nickels and quarters. If he has \$7.20 worth of coins, how many of each does he have?

7. The sum of two numbers is 3634. Their difference is 1210. Find the two numbers.