

9/5/14

- 8) The sum of three numbers is 24. Twice the smallest number is 2 less than the largest number, and the largest number is equal to the sum of the other two. What are the three numbers? Identify the variables and set up a system of equations to represent this situation.

Let x be the 1st # (smallest)

Let y be the 2nd # (middle)

Let z be the 3rd # (largest)

$$\textcircled{1} \quad x + y + z = 24$$

$$\textcircled{2} \quad 2x = z - 2$$

$$\textcircled{3} \quad z = x + y$$

Solve
Nspire

- 9) A theater has tickets at \$6 for adults, \$3.50 for students, and \$2.50 for children under 12 years old. A total of 278 tickets were sold for one showing with a total revenue of \$1300. If the number of adult tickets sold was 10 less than twice the number of student tickets, how many of each type of ticket were sold for the showing? Identify the variables and set up a system of equations to represent this situation.

Try it!

- 10) A cashier has 25 coins consisting of nickels, dimes, and quarters with a value of \$4.90. If the number of dimes is 1 less than twice the number of nickels, how many of each type of coin does she have? Identify the variables and set up a system of equations to represent this situation.

- 10) A cashier has 25 coins consisting of nickels, dimes, and quarters with a value of \$4.90. If the number of dimes is 1 less than twice the number of nickels, how many of each type of coin does she have? Identify the variables and set up a system of equations to represent this situation.

Let x be the # of nickels ($5¢ = 0.05$)

Let y be the # of dimes ($10¢ = 0.10$)

Let z be the # of quarters ($25¢ = 0.25$)

$$\textcircled{1} \quad x + y + z = 25$$

$$\textcircled{2} \quad 0.05x + 0.10y + 0.25z = 4.90$$

$$\textcircled{3} \quad \underline{y = 2x - 1}$$

solve! $(3, 5, 17)$ \therefore The cashier has 3 nickels, 5 dimes, and 17 quarters.

- 11) Jovita divides \$17,000 into three investments: a savings account paying 6% annual interest, a bond paying 9%, and a money market fund paying 11%. The annual interest from the three accounts is \$1540, and she has three times as much invested in the bond as in the savings account. What amount does she have invested in each account? Identify the variables and set up a system of equations to represent this situation.



Try it!

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TEXAS INSTRUMENTS

Document7 x

1.1 *Unsaved

linSolve $\begin{cases} x+y+z=24 \\ 2 \cdot x=z-2 \\ z=x+y \end{cases}, \{x,y,z\}$ {5,7,12}

The smallest # is 5, the middle # is 7, and the largest # is 12.

