Solve each of the problems algebraically. Use a system of 2 equations with 2 variables. 1. Donna and Mike receive a total of $\$ 275$. The amount received by Donna is $\$ 10$ more than four times the amount received by Mike. How much did each person receive?
2. Peter invests $\$ 400$, part at $\mathbf{4 \%}$ per year and the rest at $6.5 \%$ per year. If the total interest for one year was $\$ 24$, then how much did he invest at each rate?
3. A collection of ordinary dimes and nickels is worth a total of $\mathbf{\$ 1 0}$. If the number of dimes is five less than twice the number of nickels, then how many coins of each type are in the collection?

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Solve each of the problems algebraically. Use a system of 2 equations with 2 variables.
4. Coffee worth 80 cents per pound is mixed with coffee worth $\$ 1.10$ per pound to produce a 50 pound blend worth 89 cents per pound. How much of each type of coffee is used?
5. Six hot dogs and 4 sodas cost $\$ 6.70$. Five hot dogs and 7 sodas cost $\$ 7.60$. What is the cost of each item?
6. A chemist has one solution which is $20 \%$ acid and another solution which is $70 \%$ acid. How many milliliters of each should she use to make $\mathbf{6 0} \mathbf{~ m l}$ of a solution which is $\mathbf{3 5 \%}$ acid?

