$\qquad$ Period $\qquad$

1) Find the value of two numbers if their sum is 145 and their difference is 33 .
2) The difference of two numbers is 5 . Their sum is 139 . What are the numbers?
3) A metallurgist needs to make 12 kg of an alloy containing $65 \%$ iron. She is going to melt and combine one metal that is $70 \%$ iron with another metal that is $40 \%$ iron. How much of each should she use?
4) Eduardo wants to make 11 fl . oz. of a $70 \%$ sugar solution by mixing together a $42 \%$ sugar solution and a $86 \%$ sugar solution. How much of each solution must he use?
5) The school that Matt goes to is selling tickets to a fall musical. On the first day of ticket sales the school sold 14 senior citizen tickets and 5 student tickets for a total of $\$ 181$. The school took in $\$ 137$ on the second day by selling 3 senior citizen tickets and 10 student tickets. What is the price each of one senior citizen ticket and one student ticket?
6) Amy and Matt are selling pies for a school fundraiser. Customers can buy cherry pies and lemon meringue pies. Amy sold 9 cherry pies and 9 lemon meringue pies for a total of $\$ 315$. Matt sold 3 cherry pies and 5 lemon meringue pies for a total of $\$ 141$. What is the cost each of one cherry pie and one lemon meringue pie?
7) Jack left the mall and traveled toward the desert at an average speed of $40 \mathrm{~km} / \mathrm{h}$. Ndiba left two hours later and traveled in the same direction but with an average speed of $60 \mathrm{~km} / \mathrm{h}$. How long did Jack travel before Ndiba caught up?
