Name: Date:
UNIT 10
Aim: How can we solve percent problems?
a. What is $30 \%$ of $\$ 50$ ?
c. School A has a populations of 1000 students, school B's population is $20 \%$ more than school A. How many students are in school B?

1. Guy and Jim work at a furniture store. Guy is paid $\$ 185$ per week plus $3 \%$ of his total sales in dollars, $x$. Jim is paid $\$ 275$ per week plus $2.5 \%$ of his total sales in dollars, $x$. Determine the value of $x$, in dollars, that will make their weekly pay the same.
2. Joe has a rectangular patio that measures 10 feet by 12 feet. He wants to increase the area by $50 \%$ and plans to increase each dimension by equal lengths, $x$. Which equation could be used to determine $x$ ?
1) $(10+x)(12+x)=120$
2) $(10+x)(12+x)=180$
3) $(15+x)(18+x)=180$
4) $(15)(18)=120+x^{2}$
3. New Clarendon Park is undergoing renovations to its gardens. One garden that was originally a square is being adjusted so that one side is doubled in length, while the other side is decreased by three meters. The new rectangular garden will have an area that is $25 \%$ more than the original square garden. Write an equation that could be used to determine the length of a side of the original square garden. Explain how your equation models the situation. Determine the area, in square meters, of the new rectangular garden.
