

Activity 2-2
Algebra II

Name _____

Period _____

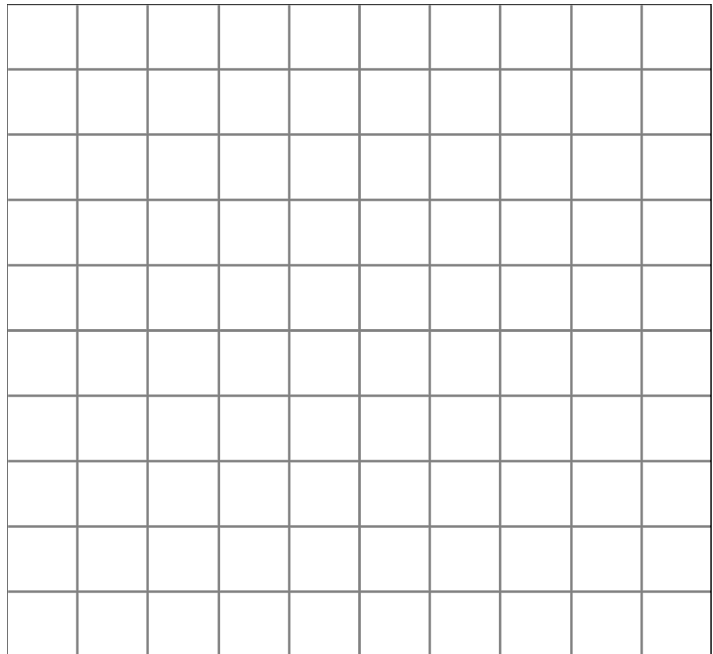
A candy dispensing machine holds 450 pieces of candy. Each time a quarter is inserted, the machine dispenses the same amount of candy. After spending \$4, there are now only 306 pieces in the machine. Find the amount of candy being dispensed each time a quarter is inserted. Use this information to write a linear equation that models the number of pieces of candy left in the machine (y) in terms of the number quarters inserted in the machine (x).

1. Number of pieces per \$0.25: _____

Linear equation: _____

2. Rewrite this equation in standard form.

3. Find the x and y intercepts and graph the function.
(Label the axes! Always!)



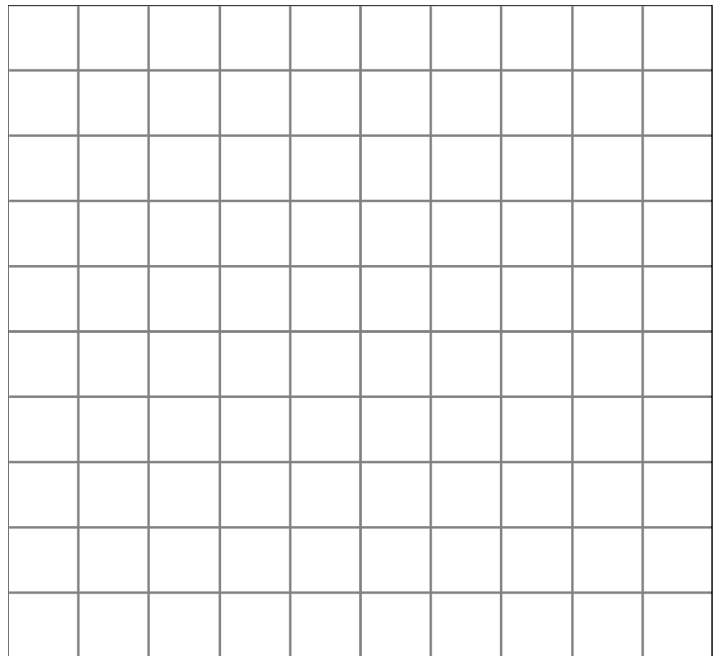
4. What do the intercepts mean in the context of the problem?

An interior design business has a loan for \$3600 and must make the same payment amount each month. After making three payments, they have paid \$900. Write a linear equation that models the balance in the loan account (y) in terms of time in months (x). (Note: At the beginning of the loan, the balance in the account is considered to be $-\$3600$)

5. Linear equation: _____

6. Rewrite the equation in standard form.

7. Find the x and y intercepts and graph the function.
(Label the axes! Always!)



8. What do the intercepts mean in the context of the problem?