**2.2.1 Warm Up SOLUTION:**

1. Yes, this is a linear function. For each element in the domain (the number of years after the start of the reduction process), there is a constant rate of change to the next element (a subtraction of 2000 steer each year).
2. The rate of change, or slope, is -2000. The size of the herd at the time the reduction program is implemented, when x = 0, is 40,000. Thus our y-intercept is 40,000. If we use the slope-intercept form of a linear equation, we determine:

****

1. At the end of year 7, we have x = 7.When we substitute for x in the equation, we calculate:

****