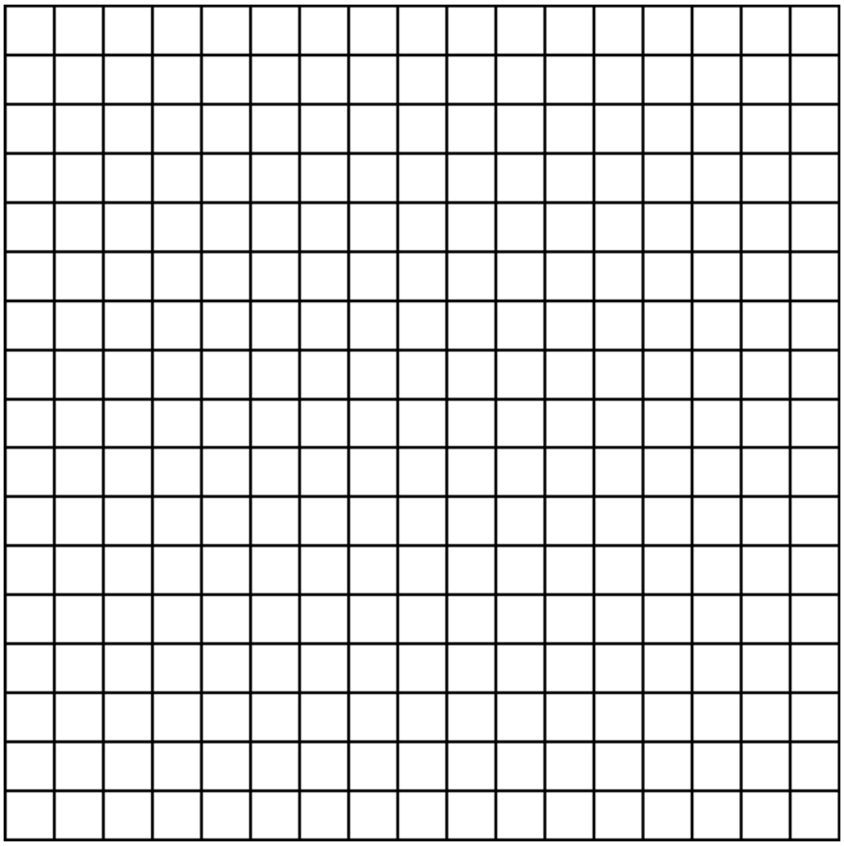
Name: _____ Date: _____

Learning Goal 4.4	I can interpolate or extrapolate to solve problems.

Example A city has grown over the past few years. This table shows how the volume of water used each month is related to the population.

Population	Monthly Water Usage (ML)
100 000	750
130 000	975
180 000	1350
220 000	1650

a. Draw a graph to represent this data.



b. Estimate the monthly water usage for a population of 150 000 people.

c. Estimate the population when the monthly water usage is 1400 ML.

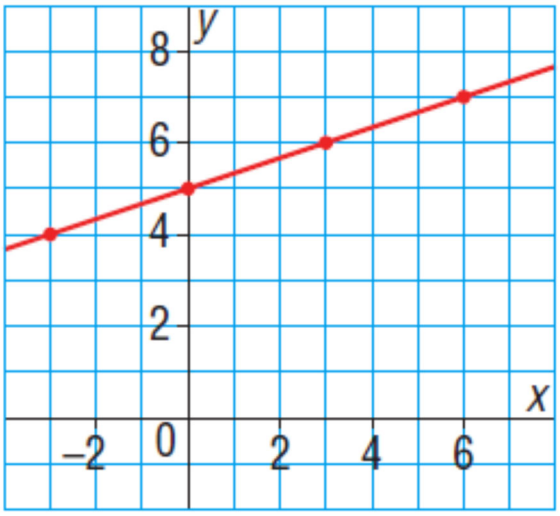
d. Predict the water usage for 250 000 people.

Interpolate

Extrapolate

Example Use this graph of a linear relation to answer the following questions.

a. Determine the value of x when $y = 3$.
Is this interpolation or extrapolation?



b. Determine the value of y when $x = 5$.
Is this interpolation or extrapolation?