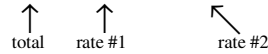## Creating Equations

Translating
Lisa weighs 7kg less than Alex. The sum of their masses is 165kg.

Two rates + given total
Playing tennis burns 25kJ/min and cycling burns 35kJ/min. You excercised for 50min total and burned 1450kJ of energy.

$$\_\_\_ = \_\_\_ x + \_\_\_ y$$

↑   ↑   ↖
total   rate #1   rate #2

Percent
Trail mix A has 10% berries and trail mix B has 20% berries. Mix them together to get 16% of 500grams in total.

Shape
The perimeter of rectangular pool is 46m. The width is 5m shorter than twice the length.

Choosing a Scale

Graphing Method for finding POI

The student council is deciding which banquet hall to book for this year's graduation dinner and dance. Thompson Hall charges a fixed cost of $1200 plus $35 per student. Adeline's Country Club charges $1000 plus $40 per student.
Write a system of linear equations to represent the situation.

One Rate + no total
$$y = \_\_\_ x + \_\_\_$$

↗   ↖
rate #   initial #

Fill in the tables to help you graph the lines

Thomson:

students	total cost

Adeline:

students	total cost
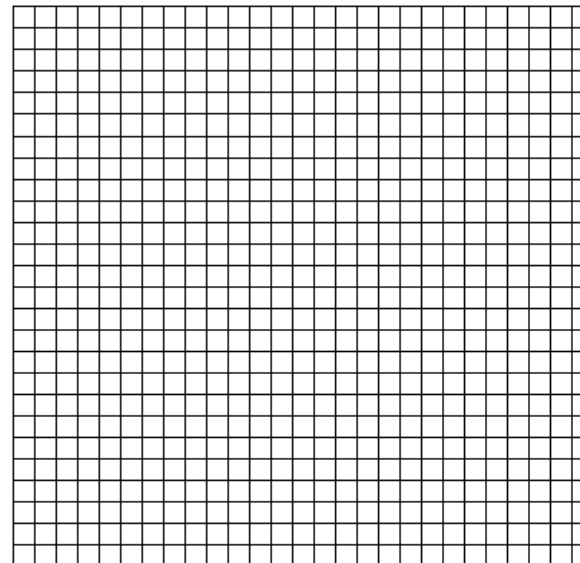
ELIMINATION

$2x + 5y = -20$

$5x - 3y + 15 = 0$

SUBSTITUTION AND CHECK

$x + 2y = -5$

$3x - y = -1$