

PROBLEM-OF-THE-DAY: ALGEBRA 1**WEEK:** February 4 to February 8**Day:** Thursday

RISD Objective: Given a graph or a table of values, students will be able to write a linear equation that describes the information.

PROBLEM #99

On a particular day in June, the exchange rate for dollars to Euros at the EuroBank was the following:

Dollars	Euros
100	85
200	160
240	190
300	235

Model this exchange rate with a linear equation.

MODEL SOLUTION #99

I will use slope to find the exchange rate.

$$M = \frac{y_2 - y_1}{x_2 - x_1}$$

Using the points (100,85) and (200,160)

$$M = \frac{160 - 85}{200 - 100}$$

$$M = \frac{75}{100}$$

$$M = 0.75$$

Now I will write the equation which will also include the bank charge.

I will use the pt-slope formula

$$y - y_1 = m(x - x_1)$$

I will use slope = 0.75 and the point (100, 85).

$$y - (85) = 0.75(x - 100)$$

$$y - (85) = 0.75x - 75$$

$$y = 0.75x + 10$$

So the exchange rate is 0.75 and the bank charge is \$10.00