5.NBT The Value of Education

Task

The table shows four people who earn the typical amount for their education level.

Name	Level of Education	Weekly Income
Miley	High School Dropout	$440.50
Niko	High School Graduate	$650.35
Taylor	2-Year College Graduate	$771.25
Pinky	4-Year College Graduate	$1,099.20

a. How much more does Niko earn than Miley in one week?

b. If Taylor and Miley both work for 2 weeks, how much more will Taylor earn?

c. How much money will Pinky earn in a month? About how long will Miley have to work to earn the same amount?

IM Commentary

The purpose of this task is for students to add, subtract, multiply, and divide decimal numbers in a real-world context. The weekly income earned by each person in the task is the median weekly income for their education level, but they have been given names to make the task easier to read and also more personal.

There is a strong positive relationship between the level of education someone has and

the income that they earn. Through this task, students can observe that an investment in education and training will increase what they can earn. This relationship is true for advanced degrees as well; those with terminal and professional degrees have higher median weekly incomes than those with bachelor degrees. A natural extension of this task would be to ask students to do some research to find out how much more they might make with different vocational or professional degrees. Both this task and the suggested extension can help students see that education beyond high school, whether technical training or college, pays off.

This task is part of a set collaboratively developed with *Money as You Learn,* an initiative of the President's Advisory Council on Financial Capability. Integrating essential financial literacy concepts into the teaching of the Common Core State Standards can strengthen teaching of the Common Core and expose students to knowledge and skills they need to become financially capable young adults. A mapping of essential personal finance concepts and skills against the Common Core State Standards as well as additional tasks and texts will be available at http://www.moneyasyoulearn.org.

Solution

a. Niko makes $650.35 per week and Miley makes $440.50 per week. We know that

$$650 - 440 = 210$$

and

$$210.35 - 0.50 = 210 + 0.35 - 0.50 = 210 - 0.15 = 209.85$$

So Niko makes $209.85 more per week than Miley.

b. Taylor makes $771.25 per week and makes twice that much in two weeks.

$$2 \times 771.25 = 2(700 + 70 + 1 + 0.25) = 1400 + 140 + 2 + 0.50$$

So Taylor makes $1542.50 in two weeks.

Miley makes $440.50 per week and so will make $881 in two weeks. Since

$$1542.50 - 881 = 742.50 - 81 = 741.50 - 80 = 701.50 - 40 = 661.50$$

We know that Taylor will make $661.50 more than Miley in two weeks.

c. There are four weeks in a month. Pinky makes $1099.20 in a week so will make

$$4 \times 1099.20 = 4 \times 1100 - 4 \times 0.80 = 4400 - 3.20 = 4396.80$$

So Pinky will make $4396.80 in a month. We can divide this by how much Miley makes in one week to find out how many weeks she will have to work.

$$4396.8 \div 440.5 \approx 4400 \div 440 = 10$$

So Miley will have to work about 10 weeks, or two and a half months, to earn the same amount that Pinky will make in one month.

Students can also calculate a more exact answer to this question if they need some practice dividing decimals.