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**College Algebra domain and range assignment with an international theme**

Topic of relevant domain and range is discussed, and a practical example is cited. This was inspired by a real trip to Peru in Dec 2014 and having to convert dollars to soles.

**Money exchange problem:**

In Peru, the currency is sol with an exchange rate of 1$ = 2.8 soles. At the money exchange counter, a fee of 15 soles is charged per transaction. Also, one must exchange at least 10$ and no more than 200 dollars.

1. Find a function S, that calculates the amount of soles received for x dollars.
2. How many soles do you get for $50.00? Round to hundredths.
3. Find x such that S(x) = 200. Interpret the result.
4. What is the relevant domain and range?

**Answer key:**

1. $S ( x ) = 2.8 x - 15 $
2. $S ( 50 ) = 2.8 ⋅ 50 - 15 = 125$

We get 125 soles for $50

1. $2.8 x - 15 = 200 ; x = 76.79$

This means we get 200 soles from $76.79

1. D=[10,200] and R=[13,545]

**Homework extension**

In class, we worked on money exchange problem. For this task, find a different country and its corresponding currency. Set up your own problem by finding the exchange rate, come up with a transaction fee and a minimum/maximum amount to change.

Solve part 1 to 4 for your own problem and post reply - either in text or on paper in class.