

The Predicament of Betsy & Bert: *Applying Comparative Advantage*

Household Chores (Output per hour)		
	Dishwashing (Number of sink loads)	Sweeping (Number of trash loads)
Betsy	2	3
Bert	1	1

Part 1: The Problem

Betsy and her brother Bert must help with the household chores before they can go out with their friends. Their job is twofold:

- They must wash & dry one sink full of dirty dishes that accumulated for 3 days.
- They must sweep up & take out 3 loads of trash from the garage, which hasn't been cleaned since the summer of 2000.

Bert & Betsy's parents have announced that neither of them may go out until both jobs are completed. Both Bert & Betsy want to go out with their friends as soon as possible. As shown in the table, Betsy can wash 2 sink loads of dishes in 1 hour, or she can sweep up & take out 3 loads of trash. Bert can wash 1 sink load of dishes in 1 hour, or he can sweep up & take out 1 load of trash. (Assume that if Bert & Betsy work together, they still work at the pace shown in the table.) Answer the questions below to determine how Bert & Betsy can complete both jobs in the shortest amount of time.

1. Who is better at cleaning dishes: Bert or Betsy?
2. If Bert & Betsy work together, how many loads of dishes can they do in one hour?
3. How many minutes would it take for them to wash one load of dishes working together?
(Show how you got your answer)
4. Who is better at sweeping up & taking out trash: Bert or Betsy?
5. If Bert & Betsy work together, how many loads of trash can they do in one hour?
6. How many minutes would it take for them to sweep up & take out 3 loads working together? (Show how you got your answer)

Part 2: Analyzing the Options

Now that you have worked with the data, it is time to use this information to make a decision. Read each of the options below. Answer the questions to determine the total amount of time it would take to complete the job of sweeping up & taking out 3 loads of trash & washing 1 sink full of dishes.

Option 1 – The Parents’ Plan: Bert & Betsy’s parents suggest that they consider dividing the tasks by working together on both jobs. First they should both work on the dishes, then they should both tackle the sweeping. Betsy complains that this wouldn’t be fair because Bert is a lazy slob & won’t do his share of the work. However, she is willing to go along if this allows them to finish sooner.

Time to complete 1 sink full of dishes: _____
Time to complete 3 loads of trash: _____
Time it would take for both to be finished: _____

Option 2 – Betsy’s Plan: Betsy argues that they should divide up the tasks & work separately. She says she should do the dishes because she likes this job better &, besides, Bert made most of the mess in the garage so he should clean up the trash.

Time to complete 1 sink full of dishes: _____
Time to complete 3 loads of trash: _____
Time it would take for both to be finished: _____

Option 3 – Bert’s Plan: Bert argues that Betsy should do all the work. He suggests that this would be the most efficient option because she is so much faster & better at doing both jobs.

Time to complete 1 sink full of dishes: _____
Time to complete 3 loads of trash: _____
Time it would take for both to be finished: _____

Option 4 – Mr. Booth’s Plan: Mr. Booth kicks down their front door & tells them they are all wrong because each person should specialize in what he or she does best. He recommends that Betsy should do all the sweeping because, of the two jobs & compared with Bert, she is better at sweeping. Bert should do all the dishwashing because this is what he does best.

Time to complete 1 sink full of dishes: _____
Time to complete 3 loads of trash: _____
Time it would take for both to be finished: _____

7. Which option is the most efficient: which allows Betsy & Bert to complete the job in the shortest amount of time? Explain?