LA to NY

Rhonda and Lucille drive from Los Angeles to New York and stay for a week. Their rental car costs 15 cents a mile and $25 per day. How much will their trip cost them?

Grade Levels 6 - 8

LA to NY

Rhonda and Lucille drive from Los Angeles to New York and stay for a week. Their rental car costs 15 cents a mile and $25 per day. How much will their trip cost them?

Context

This is an open problem that students find very engaging. It was given as a "Problem of the Week" so they were able to take it home and work on it on their own time. Some students became very creative in developing their plans and spending their money. This is a problem that lends itself to group work.

What This Task Accomplishes

This task allows students to create a solution to a problem. They become very involved in their research. They are able to integrate information from a variety of sources. It is a real world mathematics application.

What the Student Will Do

Students usually begin by finding the distance between LA and NY. Some then begin developing scenarios for the trip. How long will it take them? Where will they stay? What mileage does the rental car get and how much is gas per mile? What will they eat? What will they do when they get there? Some come to interesting insights like, "It would have been better for them to fly."

Time Required for Task

This problem took one week, but little class time was used.

Interdisciplinary Links

LA to NY fits very nicely with geography, social studies and consumer issues.

Teaching Tips

This is a problem that allows students to explore. It can be made more challenging by asking students to find the best rental car deal. Ask them to compare the cost of renting from Avis, Hertz and Budget.

Suggested Materials

- Maps
- Atlas
- Paper
- Pencil
- Calculator

Possible Solutions

There are many possible solutions depending on the assumptions the student makes. Even the mileage from LA to NY may differ depending on the routes they choose.

Benchmark Descriptors

Novice
This solution falls between Novice and Apprentice. There is a strategy that begins to lead the student to a solution, although procedures are not done correctly (3,000 x .15 = $45). Only the day charge and mileage are included as part of the solution. No other elements are included. However, because the student does have a rudimentary strategy and solution, it is more than a basic Novice.

Apprentice
This is an unusual Apprentice performance. It is obvious that the student understands the problem and is well on the way to offering an excellent solution. However, s/he becomes sidetracked by his/her considerable wit. There is a solution, but it is far from "realistic".

Practitioner
The solution indicates that the student understands the problem and developed a strategy for solving it. The steps are clear and the assumptions apparent. There is a clear explanation of the solution. This would have been an Expert solution if the student had made any observation or extension. For example, one student, an Apprentice, observed that it would have been easier for Rhonda and Lucille to fly. "In my personal opinion, I think they should fly. In order for the two of them to fly round trip, it would cost only $788. Plus, you would not have to pay for storing the car at the hotel."

Expert
There was no Expert solution in this class. There were a number of Practitioner solutions, but none went the extra distance (figuratively) to qualify as an Expert.