

THE CAR PROBLEM

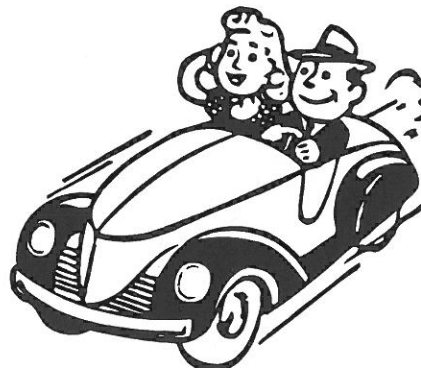
Name _____

Multistep Equations in Context

Suppose the Allmans want to rent a convertible for the day.

They have a choice of two rental companies:

- A one-day rental at **Nifty Car Rental** costs \$30 plus 60 cents per mile.
- A one-day rental at **Shazam Car Rental** costs \$55 but only charges 35 cents per mile.



① Make a good data table:

# of miles driven									
Nifty									
Total Cost (\$)									
Shazam									
Total Cost (\$)									

② Write a function for each car rental company that expresses the total cost in terms of the number of miles driven. (Use C for cost and m for miles.)

Nifty Car Rental

Shazam Car Rental

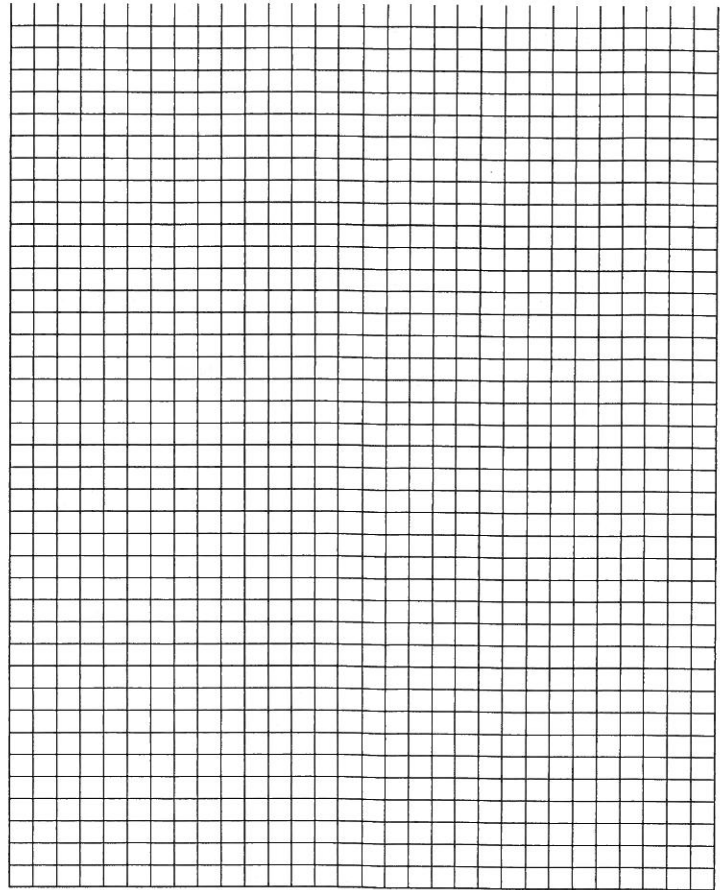
③ If the Allmans drive 225 miles, which company would be a better deal? Explain.

④ If the Allmans only have \$80 to spend, which company would be a better deal? Explain.

- ⑤ Use your functions and tables to make your best possible comparison graph that represents the costs for both companies.



Nifty vs Shazam Car Rental Comparisons



- ⑥ At what number of miles will the two companies cost the same? _____

Circle the place on the graph that verifies this.

Then use your functions to **prove your solution** with an algebraic method.

- ⑦ Which car rental company should the Allmans choose and why?