APPLICATION TASK: *ARE HYBRID CARS REALLY WORTH THE PRICE?*

Many car models are being offered in hybrid and non-hybrid varieties these days. In most cases, the hybrid version is more expensive to buy. However, hybrids typically use less gasoline than non-hybrids because their engines can also run on electricity. In this task, you will be advising car shoppers and helping them decide whether to buy a hybrid or non-hybrid vehicle. Your group will be assigned *one* car make and model from the following table. Assume the average cost of gasoline is projected to be $3.80 per gallon for the foreseeable future.

Car Make and Model	Non-Hybrid Model $	Hybrid Model $	Non-Hybrid Average MPG	Hybrid Average MPG	Average Yearly Miles Driven
Toyota Rav 4	$28,695	$30,025	25	42	12,500
Ford Fusion S	$22,120	$25,295	25	32	21,300
Lexus ES	$38,900	$41,820	24	40	8,500
Kia Optima EX	$31,795	$31,885	28	42	15,000

Source: www.fueleconomy.gov.

You will present your group's work on a collaborative poster. The poster must have four sections—one for each of today's success criteria. In each section, you will present your work, demonstrating mastery on that *I can* statement. For example, the first *I can* statement is this: *I can mathematically model a situation with a system of linear functions*. Under that section in your poster, you will need to show two linear functions—one for the cost of the non-hybrid model of your assigned car and one for the cost of the hybrid model. Each function should be labeled to identify what each variable represents. The following is a sample layout of this poster:

<table>
<tr><td colspan="2">[Your Assigned Car Type]</td></tr>
<tr><td>• I can mathematically model a situation with a system of linear functions.

Cost of non-hybrid model over time:
y = mx + b

Cost of hybrid model over time:
y = mx + b</td><td>• I can solve a system of linear equations using my preferred method (algebraically or graphically).

[Solve algebraically here.

OR

Solve graphically here.]</td></tr>
<tr><td>• I can use evidence to construct a claim about a real-world situation.

The solution to the system of linear equations above means _____.
Based on our evidence above, the _____ model is a better deal.</td><td>• I can logically communicate how my mathematical evidence supports my claim.

Our claim is supported by _____. Additionally, _____.</td></tr>
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