**Assignment 01**

1. With the price of gas continuing to rise you wish to look at the car that get better gas mileage. You narrow down your choice to following 2012 models: Ford Fiesta, Ford Focus, Chevy Volt, Chevy Cruz, Toyota Camry, Toyota Camry Hybrid, Toyota Prius and Toyota Corolla. Each company has offered you their ‘‘best deal” as listed in the following table. You are able to allocate approximately $500 for a car payment each month up to 60 months, although less time would be preferable. Use dynamical systems to determine which new car you can afford.

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| **2012 Models** | **Best Deal Price** | **Cash Down** | **Interest and Duration** |
| Ford Fiesta | $14,200 | $500 | 4.5% APR for 60 months |
| Ford Focus | $20,705 | $750 | 4.38% APR for 60 months |
| Chevy Volt | $39,312 | $1,000 | 3.28% APR for 48 months |
| Chevy Cruz | $16,800 | $500 | 4.4% APR for 60 months |
| Toyota Camry | $22,955 | 0 | 4.8% APR for 60 months |
| Toyota Camry Hybrid | $26,500 | 0 | 3% APR for 48 months |
| Toyota Prius | $16,500 | $900 | 4.25% for 60 months |
| Toyota Carolla | $19,950 | $1,000 | 44.3% for 60 months |

**Solution:**

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