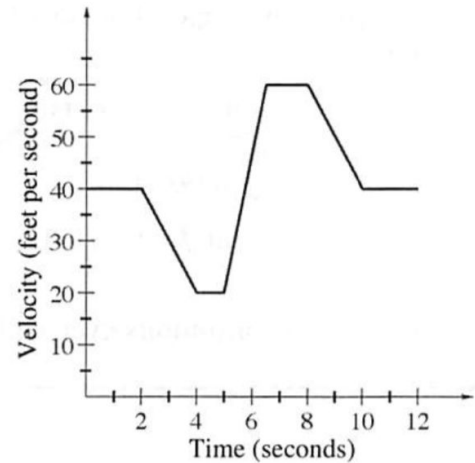# Piecewise functions meet Kinematic Motion

THE CLUNKER

Tiffani has an old car that she is constantly repairing. One day, she is driving to school when she starts having problems with the car's fuel injection system. Her velocity (in feet per second) is shown at right.

a. Recall that acceleration is the rate of change of velocity. How is acceleration represented on a velocity graph?

b. When is her acceleration negative?

c. What is her maximum acceleration?

d. Describe the motion of the vehicle when the acceleration is zero.

e. How far does Tiffani travel during the 12 seconds shown in the graph?

f. Write the piecewise function that describes Tiffani's velocity