

MATH 141 QUIZ 12
NO WORK-NO CREDIT

SPRING 08 NAME
LAST 4 DIGITS

Due Friday, 4/18/08, not accepted late!

The cost per hour of fuel for running a train is proportional to the square of the speed and is \$18 an hour when the speed is $24 \frac{mi}{hr}$. In addition, other charges are \$72 an hour regardless of the speed.

a) Set up an expression for the cost **per mile** as a function of the speed.

b) Find the speed for which this cost is a minimum.