Compare this tire to the largest tire (last one; biggest one) to get your k-value
Advanced Mathematical Decision Making

## Aspect ratio for tires

| Tire | Tire Width (mm) | Aspect Ratio (\%) | Tire height (in) | Diameter of wheel (in) | Circumference of wheel (in) | Actual speed if speedometer says 65mph | Actual distance if odometer says 35,000 | Scale factor <br> (k) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| P185/60R15 <br> Factory tire |  |  |  |  |  | 65 mph | 35,000 | NA |
| P225/40R18 |  |  |  |  |  |  |  |  |
| P195/75R14 |  |  |  |  |  |  |  |  |
| P225/45R17 |  |  |  |  |  |  |  |  |
| P315/40R26 |  |  |  |  |  |  |  |  |


|  | P185/75R14 | P205/75R14 |
| :---: | :---: | :---: |
| Diameter <br> (inches) |  |  |
| Circumference <br> (inches) |  |  |
| \# of turns in a |  |  |
| mile |  |  |$\quad$

How much further does the larger tire travel? $\qquad$

What is the scale factor k ? $\qquad$

If your odometer reading is 20,000 miles, you have actually traveled
$\qquad$ miles.

If your speedometer reading is 60 mph , your actual speed is
$\qquad$

