

Name _____ AMDM

Unit 1 Analyzing Numerical Data: Using Ratios

SAS 5: Changing Tires

Fill in the missing information for each tire.

Tire	Width (mm)	Width (in)	Aspect ratio	Height (in)	Diameter (in)	Circumference (in)
P185/60R15						
P225/40R18						
P195/75R14						
P225/45R17						
P315/40R26						

You have just purchased a new Ford F-150 XL 4x4 Regular Cab truck equipped with factory-installed P235/75R17 tires. You think these tires look too small, so you replace them with P265/70R17 tires.

How does this change in tire size affect the accuracy of speedometer and odometer readings? In other words, answer the following questions:

If your odometer reading is 20,000, you have actually traveled how many miles?

If your speedometer reading is 60, your actual speed is how many miles per hour?

Find $k = \frac{\text{circumference of bigger tires}}{\text{circumference of factory-installed tires}}$

Actual mileage = $k \bullet$ odometer reading

Actual speed = $k \bullet$ speedometer reading