SAT word problems scare you? Me too! Especially once they start talking about distance, work rates, trains leaving stations, etc. Sometimes the SAT likes to throw a particularly challenging word problem towards the end of a section, and this type of question can often involve a concept called “average speed.” Well, I know what “average” means, so this should be easy, right? Unfortunately, “average speed” has nothing to do with the mathematical average, or the mean. This is the formula to know: **Average Speed = Total Distance / Total Time.**

If you simply try to apply the “average” formula (take the mean) in these questions, you’ll get them wrong! Let’s say we see a question that goes something like this:

#1. Suzi drove 20 miles to the grocery store going 10 mph. Then she drove 24 miles to the movies to see Skyfall with a friend but only went 8 mph due to heavy traffic. What was her average speed for the whole trip?

(A) 8.4mph

(B) 8.8mph

(C) 9.0mph

(D) 9.6mph

(E) 10.0mph

A student who forgets that “average speed” is different from the “average” will probably try to solve by adding the speeds and dividing by 2. 10 + 8 / 2 = 18/2 = 9.

The savvy student plugs in the “average speed” formula. Total distance = 20 + 24 = 48. Total time = 2 hours + 3 hours = 5. The distance divided by the time = 48/5 = 9.6.

The correct answer is (D).

But how did we know the time? Because of the “DIRT” formula: **Distance = Rate x Time**. If Suzi drives 20 miles going 10mph, it will take her 2 hours to complete that distance. If she drives 24 miles going 8mph, it will take her 3 hours to complete that distance. The total drive time, therefore, is 5 hours. The “average speed” is a weighted average.

Another way students sometimes miss this type of question is taking the Total Rate instead of the Total Time. Don’t ever add the rates! After all, 48/18 = 2.67, which would be a pretty slow speed to drive! The correct answer will make sense in the “real world” too! It makes sense that the average speed for this question would be somewhere between 8mph and 10mph. A little logic can help you quickly eliminate “obviously wrong” answer choices, even if you don’t have time to do the math!

Finally, remember to *use the order of difficulty to your advantage* within each SAT Math section. Do all of the easier-level questions first, and save the most challenging ones for later. Sometimes using unconventional methods can help you score higher on SAT Math. If work and rate questions intimidate you, circle them and come back once you’ve had a look at the other “harder” end-of-section questions!