

Car Problems

Surprisingly enough, physics can be used in real life! Carefully read the situation described below and answer the accompanying questions.

While turning right out of the CHS parking lot, a reckless young student driving a 1998 Ford Taurus station wagon (0mph-60mph in 8 seconds) decides to floor it! The student assumes the light at Cougar Trail (approximately 300 feet away) will be green, but it is yellow! The light will change from yellow to red in five seconds.

1. Can the student make the light? Explain your answer in detail using math to support it.
2. If the Taurus has a braking distance of 190 feet from 70 mph, what is the fastest speed the student could be traveling to still stop at the light if he notices the light while 250 feet away?