

Please take your seats and get out your notes. You may pick up any work from the top of the black bin.

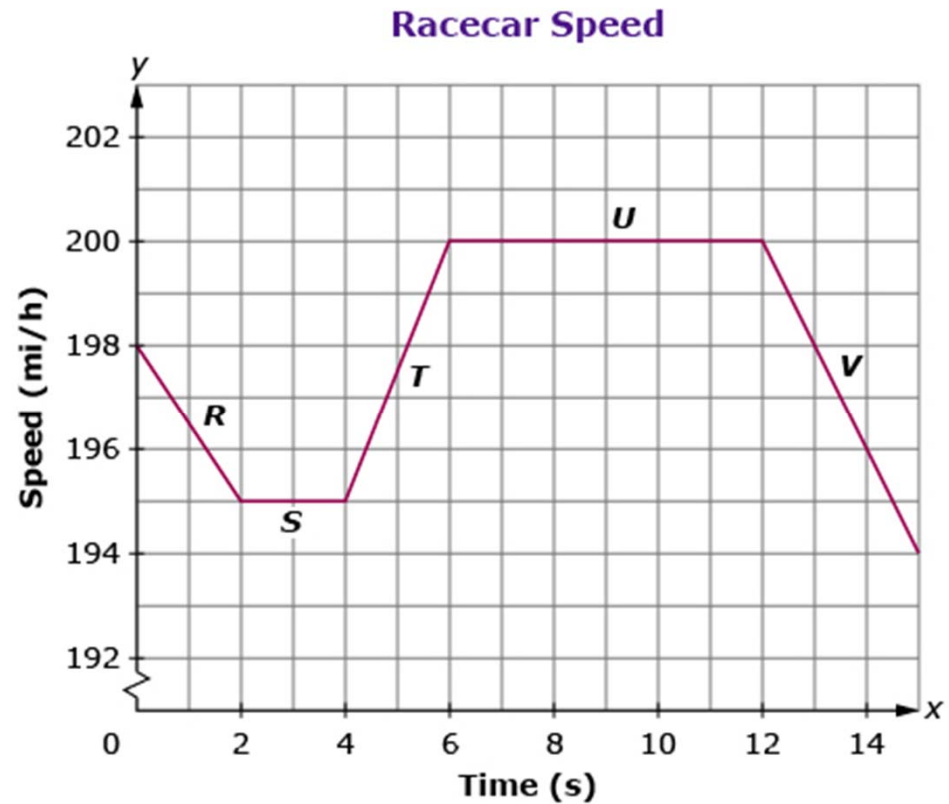
Let's Go Racing!

How might a racecar's speed change over time of the race?

If you plot a racecar's speed compared to time during a race, what might the graph look like? Would it be linear? Explain.

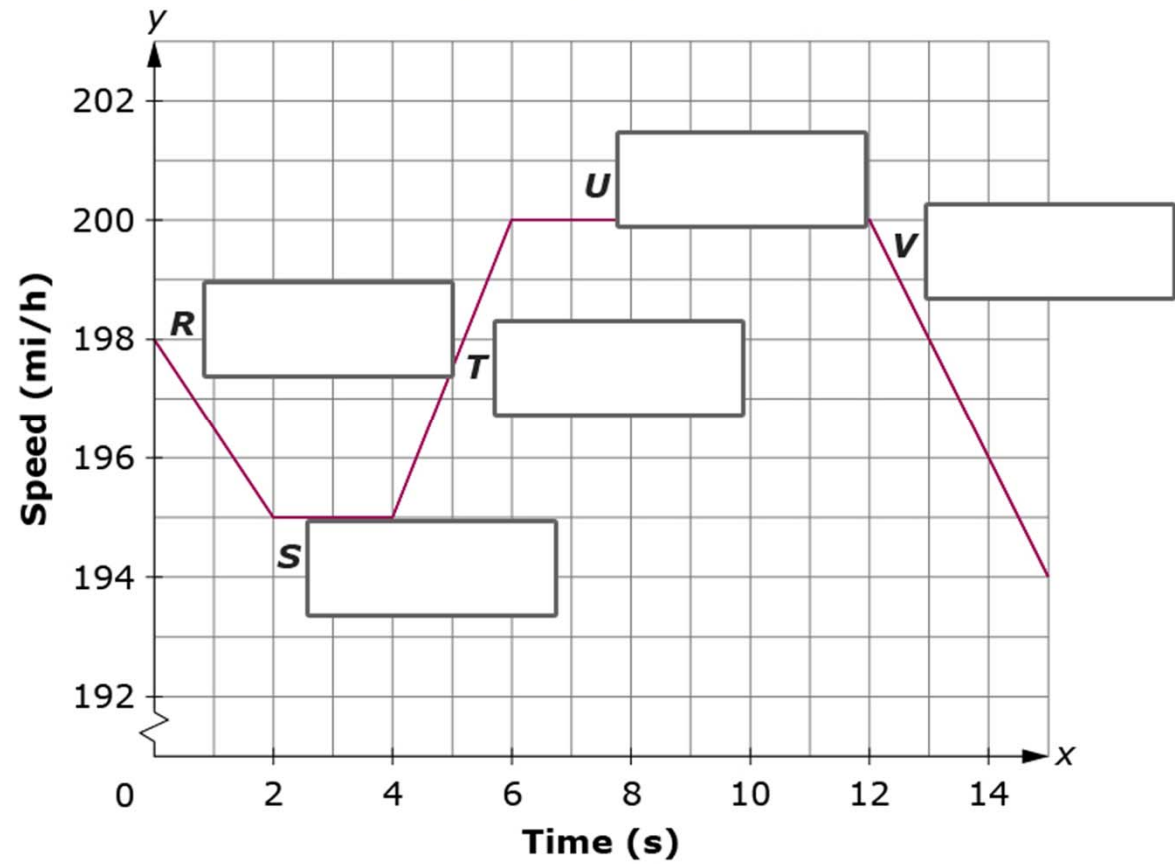
Describe the graph

Models speed of
a racecar during
part of a lap

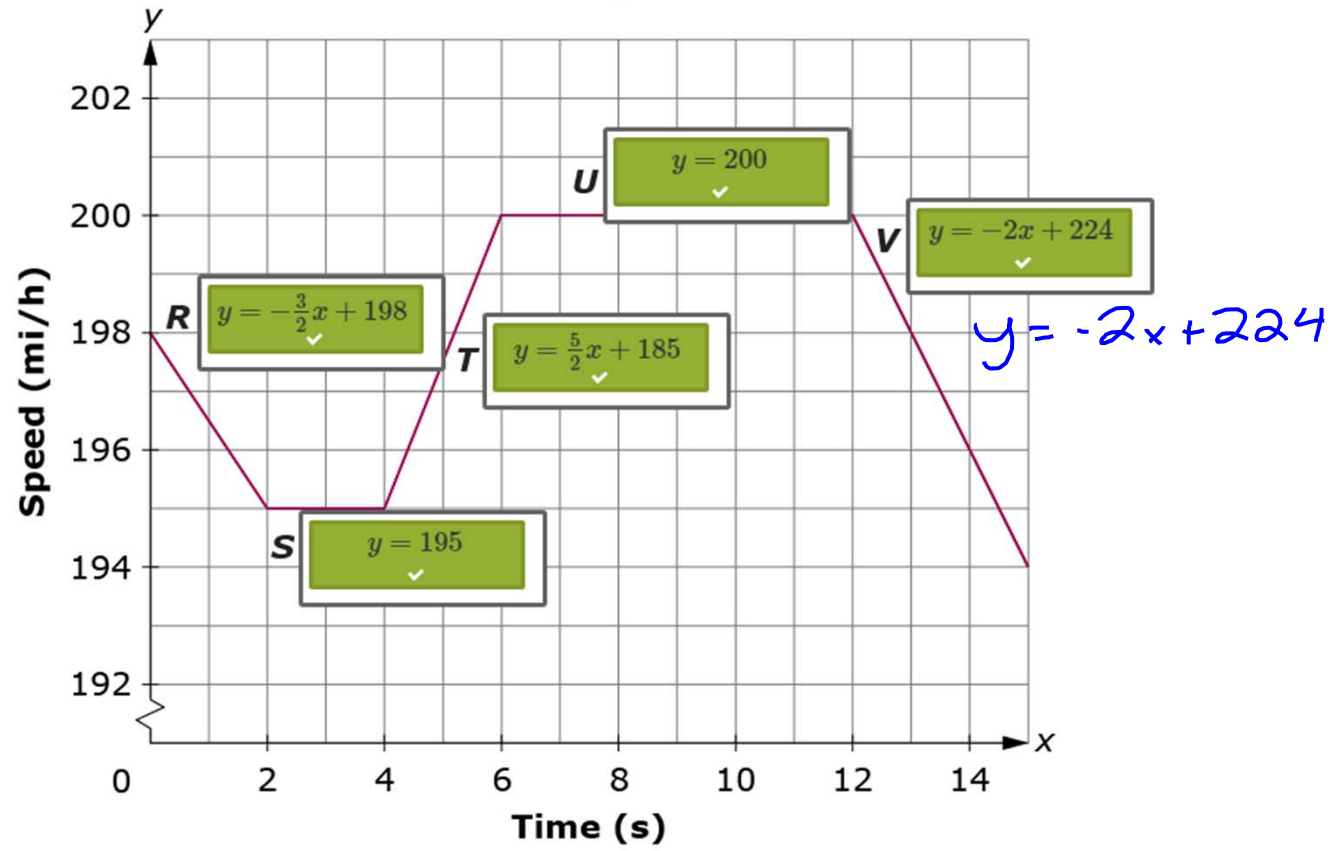


1	$y = -\frac{3}{2}x + 198$
2	$y = \frac{5}{2}x + 185$
3	$y = 200$
4	$y = 195$
5	$y = 2x + 224$
6	$x = 195$
7	$y = -\frac{1}{2}x + 224$

Racecar Speed



Racecar Speed

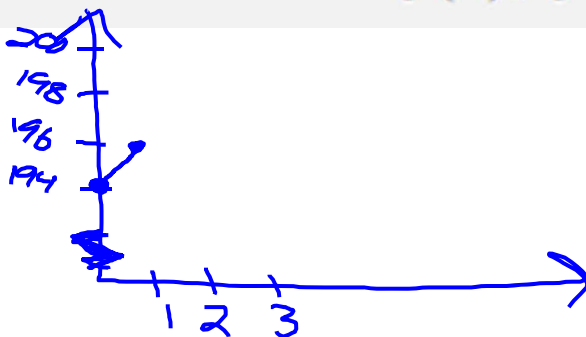


This function models the speed of another racecar

$$f(1) = 0.5(1) + 195.5$$
$$f(1) = 196$$

$$f(x) = \begin{cases} 2x + 194 & \text{if } 0 \leq x < 1 \\ \underline{0.5x + 195.5} & \text{if } 1 \leq x < 3 \\ 197 & \text{if } 3 \leq x < 11 \\ -0.5x + 202.5 & \text{if } 11 \leq x \leq 15 \end{cases}, \text{ where } x \text{ is the time in seconds}$$

find the values of $f(0)$, $f(1)$, $f(3)$, $f(11)$, and $f(15)$



$$f(0) = 2(0) + 194$$
$$f(0) = 194$$