Intellectual Need Task for Interpreting Derivatives

Courtney is going on a road trip. The function f(t) measures the amount of fuel Courtney's car has consumed (in gallons) where t is measured in hours since Courtney left her hometown.

Explain what $f'(5) = 2.5$ means.
1. Courtney's car had 2.5 gallons of fuel in its tank 5 hours after leaving her hometown.
2. The instantaneous rate of change at 5 hours is 2.5 gallons per hour
3. Courtney's car consumed 2.5 gallons of fuel during the first 5 hours of her drive from her hometown.
4. The amount of fuel Courtney's car consumed increased by 2.5 gallons each hour over the first 5 hours since leaving her hometown.
5. Starting at 5 hours, during the next hour, Courtney's car will consume another 2.5 gallons of gas.
6. Something else