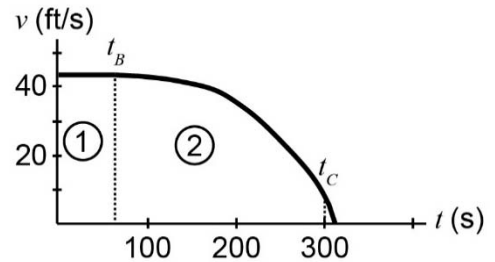
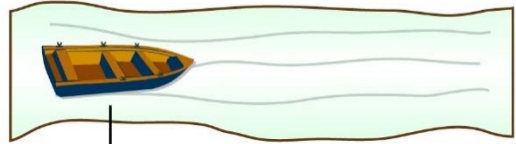


RP2-10) A boat going down river is travels at 25 knots (1 knot = 1.151 mph) relative to the shore for 1 minute before cutting its engines. The river current flows at 2 knots causing the boat's velocity relative to the shore to follow the function $v = 43.2 - \exp((t - 60) / 68)$ ft/s after the engines are cut, where t is in seconds. Determine the distance traveled by the boat in 5 minutes.



Given: $v_1 = 25 \text{ knots} = 42.2 \text{ ft/s}$
 $v = 43.2 - \exp((t - 60) / 68) \text{ ft/s}$
 $t_B = 1 \text{ min} = 60 \text{ s}$
 $t_C = 5 \text{ min} = 300 \text{ s}$

Find: s_C

Solution:

Find s_B .

Find s_C .

$s_B =$ _____

$s_C =$ _____