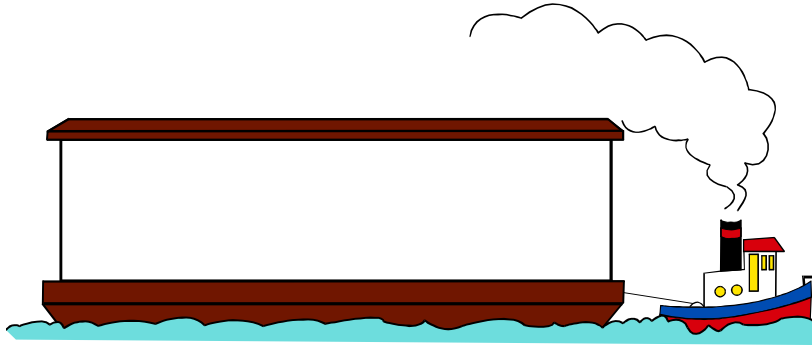


Pre-lab 8



You have a tug boat towing a barge of mass  $15,000 \text{ kg}$ . The barge is initially at rest. The tug boat can exert a force of  $30,000 \text{ N}$  and the water exerts a “drag” force  $28,000 \text{ N}$ . What is the speed of the tug and barge after they have traveled a distance  $100 \text{ m}$ ?