Capt’n Crunch’s 1000 kg boat is traveling at 90 km/h (25 m/s) when its engine shuts down. The magnitude of the frictional force F_f, between the boat and the water is proportional to the speed v *of* the boat in the relationship $F_f = 70\ v$, where v is in m/s and F_f is in newtons.

Find the time required for the boat to slow to 45 km/h (12.5 m/s)