

**Answer on Question #43404, Physics, Mechanics — Kinematics — Dynamics —**

A speedboat accelerates uniformly from rest at  $3.0\text{ m/s}^2$ . The distance the speedboat will travel between  $4.0\text{ s}$  and  $6.0\text{ s}$  is?

Solution

Law of motion of boat is

$$s = at^2/2$$

Hence, distance traveled between  $4.0\text{ s}$  and  $6.0\text{ s}$  is

$$s_2 - s_1 = a/2(t_2^2 - t_1^2) = 3/2(6^2 - 4^2) = 30\text{ m}$$