

### Who Wins the Race?

In the final sprint of a rowing race the challenger is rowing at a constant speed of  $12\text{ m/s}$ . At the point where the leader is  $100\text{ m}$  from the finish line and the challenger is  $15\text{ m}$  behind, the leader is rowing at  $8\text{ m/s}$  but starts accelerating at a constant  $0.5\text{ m/s}^2$ . Who wins?

(Hint: Check out Section 4.7.)