Problem of the Week
Problem B
Take It In Stride

Donovan and his friend Usain each think they're faster than the other. Donovan has been practicing his running, and is hoping to beat Usain in a 0.75 km race. When Usain runs, his stride length is 120 cm.

(a) If the span of Donovan's running stride length is $\frac{2}{3}$ that of Usain's, how many more strides than Usain will he have to take in order to run the 0.75 km distance?

(b) It takes both Donovan and Usain exactly 255 seconds to run 0.75 km. Who takes more strides per second? Explain your reasoning.

(c) How many strides per second did Donovan take? Round your answer to one decimal place.