Prob. 12-16

(a) $360° = 0.36\,s$

$120° - 15° = 105°$

Then $\frac{105°}{360°} = \frac{x}{0.36s} \Rightarrow x \approx 0.105s$ or $x \approx 0.11\,s$

(b) "area" of triangle $= \frac{1}{2} b h$

$\approx \frac{1}{2}(0.11s)(6.5\,cm^3/s)$

$\approx 0.36\,cm^3$

(c) $0.36\,cm^3$ flows in 1 beat, and there are 2.75 beats per second.

$\therefore$ in 1.0 min., the volume is $\approx 0.36\,cm^3 \times 2.75 \times 60$

$\approx 59\,cm^3$