33.8. **Model:** Assume the plane of the loop is perpendicular to the field direction.
Visualize: Please refer to Figure Ex33.8. The flux is due to the field through the area of the triangle. Only the left half gives a contribution as the field strength is zero on the right half.

Solve: **(a)** The flux is $\Phi = \vec{A} \cdot \vec{B}$. Take $\vec{A}$ to be into the page, perpendicular to the triangle, and thus parallel to $\vec{B}$. In this case $\Phi = AB$ where A is the area of half of the triangle. This smaller triangle has a base of 10 cm and height 20sin60° cm = 17.32 cm. Thus,

$$\Phi = AB = \frac{1}{2}(0.10 \text{ m})(0.1732 \text{ m}) \times 0.1 \text{ T} = 8.66 \times 10^{-4} \text{ Wb}$$

(b) The flux is directed into the loop. According to Lenz's law, the induced current will try to *prevent the decrease* of flux. To do this, the field of the induced current will have to point into this loop. This requires the induced current to flow *clockwise*.