(d) (4 pts) What must be the torque \( \tau_{ow} \) about the hinge point O due to the wire? Use proper signs.

\[
\tau_{ow} = +240 \quad \text{ft. lb. \hspace{1cm} counter clockwise}
\]

(e) (4 pts) Find the sine and cosine of the angle \( \theta \). The building wall is vertical, and the wire is anchored to the wall at a point 3 feet above the hinge.

\[
\sin \theta = \frac{3}{5} = 0.6
\]

\[
\cos \theta = \frac{4}{5} = 0.8
\]

(f) (6 pts) What is the tension \( T \) in the wire?

\[
T = 100 \quad \text{lb.}
\]

\[
Tl = 240 \Rightarrow T = \frac{240}{l} = \frac{240}{2.4} = 100
\]

\[
l/4 = \sin \theta \Rightarrow l = 4 \sin \theta = 2.4 \text{ ft}
\]