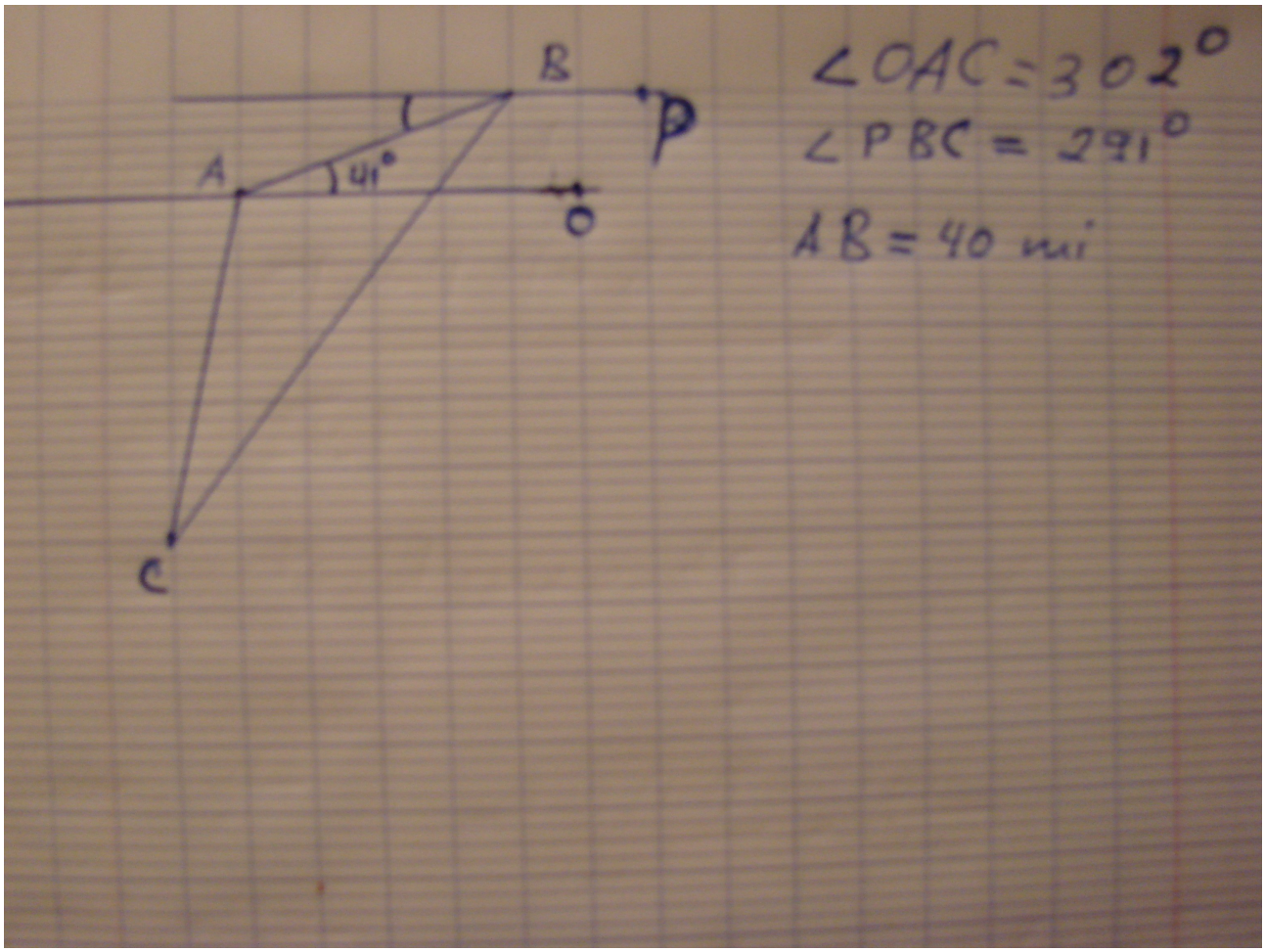
Answer on Question #41853, Math, Trigonometry



So we need to find AC and BC.
At first let's find all angles of the triangular ABC.

Angle CAB (<CAB) = 360^0-<OAC + 41^0 = 99^0

<CBA = <PBC – 180^0-41^0 = 291 – 180 -41 = 70^0

<ACB = 180^0 - <CAB - <CBA = 11^0

Using sin theorem (http://www.cut-the-knot.org/proofs/sine_cosine.shtml):

$$\frac{AB}{\sin(<ACB)}=\frac{AC}{\sin(<ABC)} \rightarrow AC=AB\frac{\sin(<ABC)}{\sin(<ACB)}=196.99\,mi$$

$$\frac{AB}{\sin(<ACB)}=\frac{BC}{\sin(<CAB)} \rightarrow BC=AB\frac{\sin(<CAB)}{\sin(<ACB)}=207.05\,mi$$

ANSWER!!!!!!!!!!!!!!!!!!!!!!!

The fire is 197 mi from tower A, and 207.5 mi from tower B.
(round to the nearest whole number)