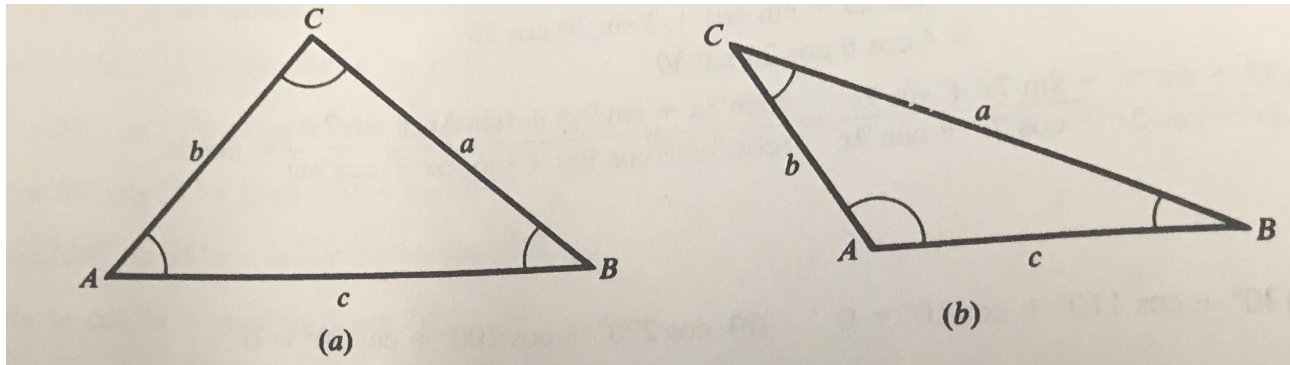


Additional Problems Assignment 10

1. Find the **exact** value of $\sin(2\theta)$, $\cos(2\theta)$, and $\tan(2\theta)$, given:

- (a) $\sin(\theta) = 3/5$ with $0 \leq \theta \leq \frac{\pi}{2}$.
- (b) $\sin(\theta) = 3/5$ with $\frac{\pi}{2} \leq \theta \leq \pi$.
- (c) $\tan(\theta) = -1/5$ with $\frac{\pi}{2} \leq \theta \leq \pi$.

2. Considered a general triangle labeled as below (note it can either look like (a) or (b)).



- (a) Suppose $a = 17, c = 14$, and $B = 30^\circ$ find b .
 - (b) Suppose $b = 17, c = 12$, and $A = 24^\circ$ find B .
 - (c) Suppose $c = 189, a = 150$, and $C = 85^\circ$ find A .
 - (d) Suppose $a = 25, b = 38$, and $C = \frac{\pi}{15}$ find c .
3. Using the notation from above solve the following triangle (that is find the unknown side lengths and unknown angle).
- (a) $a = 125, A = 54^\circ, B = 65^\circ$
 - (b) $a = 512, b = 426, A = 48.3^\circ$
 - (c) $a = 6.34, b = 7.30, c = 9.98$