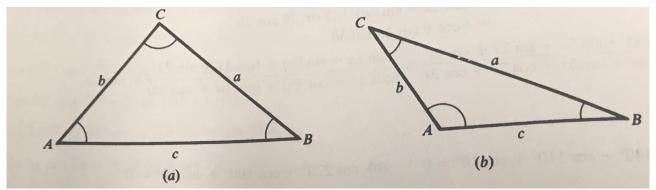
Additional Problems Assignment 10

- 1. Find the **exact** value of $\sin(2\theta)$, $\cos(2\theta)$, and $\tan(2\theta)$, given:
 - (a) $\sin(\theta) = 3/5$ with $0 \le \theta \le \frac{\pi}{2}$.
 - (b) $\sin(\theta) = 3/5$ with $\frac{\pi}{2} \le \theta \le \pi$.
 - (c) $\tan(\theta) = -1/5$ with $\frac{\pi}{2} \le \theta \le \pi$.
- 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