Homework Section 1.4 - Due 3rd Feb

Some of the problems are a bit tricky. Email me or visit my office hours if you need some hints!

1. #27 on page 37.
2. Find the *possible* quadrant(s) that θ could lie in given:
   (a) $\cos\theta > 0$ and $\tan\theta < 0$.
   (b) $\cot\theta < 0$ and $\sin\theta > 0$.
   (c) $\tan\theta > 0$ and $\csc\theta < 0$.
3. #62 on page 38.
4. #70 on page 38.
5. Suppose $\theta \in [0^\circ, 360^\circ)$, that is, θ is any angle between 0° and 360° but *not* 360° (hence the round bracket). For what value(s) of θ are the following functions not defined?
   (a) $\sec\theta$.
   (b) $\tan(2\theta)$.
6. Suppose θ is a positive angle with $\theta < 90^\circ$. What are the possible signs of:
   (a) $\cos(2\theta)$?
   (b) $\sin(2\theta)$?

   Note that 0 is not a positive number.
7. #88 on page 39.