Math 375 **Spring 2026**

Trig Equation Warmup
Switching quadrants and moving outside 0° to 360°

1) Begin: $\sin(20°) = 0.3420$, $\cos(20°) = 0.9397$, $\tan(20°) = 0.3640$.

Find another angle θ between 0° and 360° where $\sin\theta = 0.3420$.
Find an angle between 0° and 360° where the sine of that angle is -0.3420.
Find another angle between 0° and 360° where the sine of that angle is -0.3420.

Repeat for cosine and tangent.

2) Solve: $\cos\theta = 0.5$. (No calculator.)
a) Find all solutions between 0° and 360°.
b) Find all solutions, measured in degrees. Also, rewrite more compactly.
c) Find all solutions between 0 and 2π.
d) Find all solutions, measured in radians. Also, rewrite more compactly.

3) Solve $\sin\theta = -0.81$. (Calculator for first step.) Same parts (a)-(d) as above.

4) Solve $\tan\theta = 3.4$. (Calculator for first step.) Same parts (a)-(d) as above. For parts (b) and (d), rewrite more compactly.