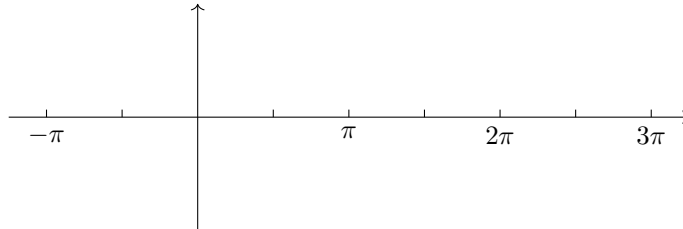


MATH 2A/5A Prep: Trigonometric Functions

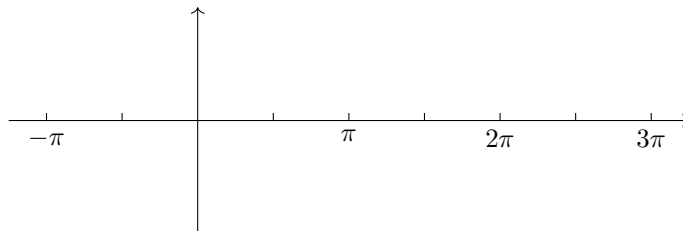
Facts to Know:

1. Graph of trigonometric functions:

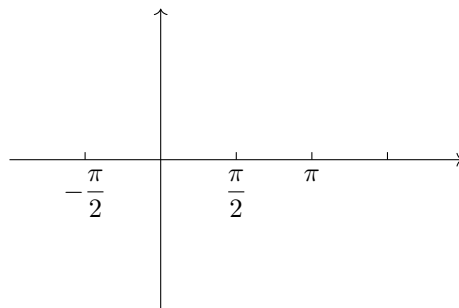
$$y = \sin(x):$$



$$y = \cos(x):$$



$$y = \tan(x):$$



2. Trigonometric identities:

- $\sin^2(x) + \cos^2(x) =$
- $\tan^2(x) + 1 =$
- $\cot^2(x) + 1 =$
- $\sin(2x) =$
- $\cos(2x) =$

Examples:

1. Write $\sin^2(x)$ in terms of $\cos(2x)$.

2. Prove the identities $\tan^2(x) + 1 = \sec^2(x)$ and $\cot^2(x) + 1 = \csc^2(x)$.

3. Find the intervals that describe the solution to $\sin(x) > 0$.

