

## trig notes structure

### theory

- sin, cos, tan definitions
- names and correspondence with reciprocal functions
- unit circle
- radian definition
- sin rule  $\frac{\sin \alpha}{a} = \frac{\sin \beta}{b} = \frac{\sin \delta}{d}$
- cos rule  $c^2 = a^2 + b^2 - 2ab \cos \theta$
- $\sin^2 \theta + \cos^2 \theta = 1$
- $\sin(\alpha \pm \beta) = \sin(\alpha)\cos(\beta) \pm \cos(\alpha)\sin(\beta)$
- $\cos(\alpha \pm \beta) = \cos(\alpha)\cos(\beta) \mp \sin(\alpha)\sin(\beta)$
- graph of sin, cos, tan
- derivability
- other identities based on circle

### problem kinds

- incomplete triangles
- how to find the triangles