

Name: \_\_\_\_\_

Trigonometric Functions and Ref. angles

Geometry Pd

|    | Degrees | Radians                                                                                                                                                     | Reference angle | Sin | Cos | tan | $\text{Csc} = \frac{1}{\text{Sin}}$ | $\text{Sec} = \frac{1}{\text{Cos}}$ | $\text{Cot} = \frac{1}{\text{tan}}$ |
|----|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|-----|-----|-------------------------------------|-------------------------------------|-------------------------------------|
| 1  | 0°      |                                                                                                                                                             | 0°              |     |     |     |                                     |                                     |                                     |
| 2  | 30°     |                                                                                                                                                             | 30°             |     |     |     |                                     |                                     |                                     |
| 3  | 45°     |                                                                                                                                                             | 45°             |     |     |     |                                     |                                     |                                     |
| 4  | 60°     |                                                                                                                                                             | 60°             |     |     |     |                                     |                                     |                                     |
| 5  | 90°     |                                                                                                                                                             | 90°             |     |     |     |                                     |                                     |                                     |
| 6  | 120°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 7  | 135°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 8  | 150°    |                                                                                                                                                             | 30°             |     |     |     |                                     |                                     |                                     |
| 9  | 180°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 10 | 210°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 11 | 225°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 12 | 240°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 13 | 270°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 14 | 300°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 15 | 315°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
| 16 | 330°    |                                                                                                                                                             | 30°             |     |     |     |                                     |                                     |                                     |
| 17 | 360°    |                                                                                                                                                             |                 |     |     |     |                                     |                                     |                                     |
|    |         | SOH-CAH-TOA; $\text{Sin} = \frac{\text{Opp}}{\text{Hyp}}$ , $\text{Cos} = \frac{\text{Adj}}{\text{Hyp}}$ , and $\text{Tan} = \frac{\text{Opp}}{\text{Adj}}$ |                 |     |     |     |                                     |                                     |                                     |

Reference angle is from 0° to 90°, use the +ve or -ve x-axis as your initial axis. Reference angle is always positive.

All {Quadrant 1} → Students {Quadrant 2} → Take {Quadrant 3} → Calculus {Quadrant 4}

All +ve in {QI} → Sin +ve in {QII} → Tan +ve in {QIII} → Cos +ve in {QIV}