## SAT PREP

## Unit circle and trigonometric ratio



|  | $\boldsymbol{\operatorname { s i n }} \theta$ | $\boldsymbol{\operatorname { c o s }} \theta$ | $\boldsymbol{\operatorname { t a n }} \theta$ | $\cot \theta$ | $\boldsymbol{s e c} \theta$ | $\boldsymbol{\operatorname { c s c }} \boldsymbol{\theta}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0^{\circ}=0 \pi=2 \pi$ | 0 | 1 | 0 | --- | 1 | --- |
| $30^{\circ}=\pi / 6$ | 1/2 | $\sqrt{3} / 2$ | $\sqrt{3} / 3$ | $\sqrt{3}$ | $2 \sqrt{3} / 3$ | 2 |
| $45^{\circ}=\pi / 4$ | $\sqrt{2} / 2$ | - $\sqrt{2} / 2$ | 1 | 1 | $\sqrt{2}$ | $\sqrt{2}$ |
| $60^{\circ}=\pi / 3$ | $\sqrt{3} / 2$ | 1/2 | $\sqrt{3}$ | $\sqrt{3} / 3$ | 2 | $2 \sqrt{3} / 3$ |
| $90^{\circ}=\pi / 2$ | 1 | 0 | --- | 0 | --- | 1 |
| $120^{\circ}=2 \pi / 3$ | $\sqrt{3} / 2$ | -1/2 | $-\sqrt{3}$ | $-\sqrt{3} / 3$ | -2 | $2 \sqrt{3} / 3$ |
| $135^{\circ}=3 \pi / 4$ | $\sqrt{2} / 2$ | $-\sqrt{2} / 2$ | -1 | -1 | $-\sqrt{2}$ | $\sqrt{2}$ |
| $150^{\circ}=5 \pi / 6$ | 1/2 | $-\sqrt{3} / 2$ | $-\sqrt{3} / 3$ | $-\sqrt{3}$ | -2 $\sqrt{3} / 3$ | 2 |
| $180^{\circ}=\pi$ | 0 | -1 | 0 | --- | -1 | --- |
| $210^{\circ}=7 \pi / 6$ | -1/2 | $-\sqrt{3} / 2$ | $\sqrt{3} / 3$ | $\sqrt{3}$ | $-2 \sqrt{3} / 3$ | -2 |
| $225^{\circ}=5 \pi / 4$ | $-\sqrt{2} / 2$ | $-\sqrt{2} / 2$ | 1 | 1 | $-\sqrt{2}$ | $-\sqrt{2}$ |
| $240^{\circ}=4 \pi / 3$ | $-\sqrt{3} / 2$ | -1/2 | $\sqrt{3}$ | $\sqrt{3} / 3$ | -2 | $-2 \sqrt{3} / 3$ |
| $270^{\circ}=3 \pi / 2$ | -1 | 0 | --- | 0 | --- | -1 |
| $300^{\circ}=5 \pi / 3$ | $-\sqrt{3} / 2$ | 1/2 | $-\sqrt{3}$ | $-\sqrt{3} / 3$ | 2 | $-2 \sqrt{3} / 3$ |
| $315^{\circ}=7 \pi / 4$ | $-\sqrt{2} / 2$ | $\sqrt{2} / 2$ | -1 | -1 | $\sqrt{2}$ | $-\sqrt{2}$ |
| $330^{\circ}=11 \pi / 6$ | -1/2 | $\sqrt{3} / 2$ | $-\sqrt{3} / 3$ | $-\sqrt{3}$ | $2 \sqrt{3} / 3$ | -2 |

