## Exact Trig Values

In the triangles below, fill in the missing side lengths (surd form where necessary) and label the angles.


Use the triangles to complete the table below. Give your answers as surds/fractions where necessary.

|  |  | $30^{\circ}$ | $45^{\circ}$ | $60^{\circ}$ |
| :--- | :--- | :--- | :--- | :--- |
| $\operatorname{Sin}(\theta)$ |  |  | $90^{\circ}$ |  |
| $\operatorname{Cos}(\theta)$ |  |  |  |  |
| $\operatorname{Tan}(\theta)$ |  |  |  |  |
|  |  |  |  |  |

## Answers

In the triangles below, fill in the missing side lengths (surd form where necessary) and label the angles.


Use the triangles to complete the table below. Give your answers as surds/fractions where necessary.

|  | $30^{\circ}$ | $45^{\circ}$ | $60^{\circ}$ | $90^{\circ}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\boldsymbol{\operatorname { S i n }}(\theta)$ | $\frac{1}{2}$ | $\frac{1}{\sqrt{2}}$ | $\frac{\sqrt{3}}{2}$ | 1 |
| $\boldsymbol{\operatorname { C o s } ( \theta )}$ | $\frac{\sqrt{3}}{2}$ | $\frac{1}{\sqrt{2}}$ | $\frac{1}{2}$ | 0 |
| $\boldsymbol{\operatorname { T a n } ( \theta )}$ | $\frac{1}{\sqrt{3}}$ | 1 | $\sqrt{3}$ |  |

