## discovering sum of two angles identities

Use the unit circle to find the following:
$\sin \left(60^{\circ}\right)=$
$\sin \left(150^{\circ}\right)=$
$\sin \left(210^{\circ}\right)=$
$\sin \left(60^{\circ}+150^{\circ}\right)=$
$\sin \left(60^{\circ}\right)+\sin \left(150^{\circ}\right)=$
Is $\sin \left(60^{\circ}+150^{\circ}\right)=\sin \left(60^{\circ}\right)+\sin \left(150^{\circ}\right)$ ?


Label the legs in the right triangle.


Following the PowerPoint, label the sides of the four right triangles in the diagram to discover the sum of two angles identities.

$\sin (a+b)=$
$\cos (a+b)=$

