

Today's Plan:

Learning Target (standard): I will use the sum and difference trigonometric identities to evaluate expressions. I will establish identities.

Students will: Complete practice problems over previous concepts at the boards and take a test on trigonometric identities.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students with test problems.

Assessment: Board work, homework check and test.

Differentiation: Students will work at the board, go over and correct homework at their seats and actively engage in test problems.

Find the exact value.

$$\begin{aligned}
 & \sin 165^\circ \\
 &= \sin(120^\circ + 45^\circ) \\
 &= \sin 120^\circ \cos 45^\circ + \cos 120^\circ \sin 45^\circ \\
 &= \left(\frac{\sqrt{3}}{2}\right)\left(\frac{\sqrt{2}}{2}\right) + \left(-\frac{1}{2}\right)\left(\frac{\sqrt{2}}{2}\right) \\
 &= \frac{\sqrt{6}}{4} - \frac{\sqrt{2}}{4} \\
 &= \frac{\sqrt{6} - \sqrt{2}}{4}
 \end{aligned}$$

