

## Precalculus

# Trigonometric functions computable with algebraic numbers using special angles

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2019

## Example

Find the exact value of the trigonometric function using radicals.

$$\cos(105^\circ) = \cos(45^\circ + 60^\circ)$$

$$= \cos(45^\circ) \cos(60^\circ) - \sin(45^\circ) \sin(60^\circ)$$

$$= \frac{\sqrt{2}}{2} \cdot \frac{1}{2} - \frac{\sqrt{2}}{2} \cdot \frac{\sqrt{3}}{2}$$

$$= \frac{\sqrt{2} - \sqrt{6}}{4}$$

we know the trig  
f-ns of  $45^\circ$  and  $60^\circ$

Angle sum f-la

