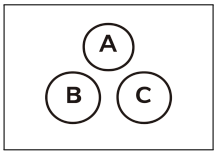
# 37 Formulas and Identities Sum to Product B




$\alpha = 105°$

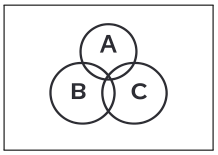
$\beta = 45°$

$\sin(105°) - \sin(45°) = 2\cos(75°) \times \sin(30°)$

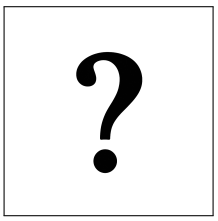
$\sin(105°) - \sin(45°) = 2\cos(75°) \times (1/2)$

$\sin(105°) - \sin(45°) = \cos(75°)$

$\sin(105°) - \sin(45°) = \sqrt{6} - \sqrt{2}/4$




$\sin(\alpha) - \sin(\beta) = 2\cos((\alpha + \beta)/2) \times \sin((\alpha - \beta)/2)$




$\alpha = 165°$

$\beta = 15°$

$\sin(\alpha) - \sin(\beta) = ?$

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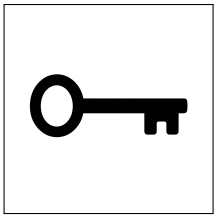

$\alpha = 165°$
$\beta = 15°$
$\sin(\alpha) - \sin(\beta) = 2\cos((\alpha + \beta)/2) \times \sin((\alpha - \beta)/2)$
$\sin(165°) - \sin(15°) = 2\cos(90°) \times \sin(75°)$
$\sin(165°) - \sin(15°) = 2 \times 0 \times \sin(75°)$
$\sin(165°) - \sin(15°) = 0$