

# 7.3 - Angle Addition Identities

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## Skills

- Use angle addition and subtraction identities to verify identities
  - Use angle addition and subtraction identities to evaluate expressions
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Example

$$\sin(2x)\cos(x) + \cos(2x)\sin(x) = ?$$

Example

$$\sin\left(\frac{11\pi}{12}\right)\cos\left(\frac{\pi}{4}\right) - \cos\left(\frac{11\pi}{12}\right)\sin\left(\frac{\pi}{4}\right) = ?$$

# Example

$$\sin\left(\frac{\pi}{2} - \theta\right) = \cos(\theta)$$

# Cosine of a Sum

$$\cos(\alpha \pm \beta) = \cos(\alpha)\cos(\beta) \mp \sin(\alpha)\sin(\beta)$$

## Example

$$\cos(3x)\cos(2x) + \sin(3x)\sin(2x) = ?$$

# Example

$$\cos(\pi - \theta) = -\cos(\theta)$$