Vocabulary: Sum and Difference Identities for Sine and Cosine

Vocabulary

- Identity – an equation that is true for all values.
  - A *trigonometric identity* is an equation involving trigonometric functions that is true for all possible angles.
    - The *sum and difference identities for sine* are:
      - $\sin(\alpha + \beta) = \sin\alpha\cos\beta + \cos\alpha\sin\beta$
      - $\sin(\alpha - \beta) = \sin\alpha\cos\beta - \cos\alpha\sin\beta$
    - The *sum and difference identities for cosine* are:
      - $\cos(\alpha + \beta) = \cos\alpha\cos\beta - \sin\alpha\sin\beta$
      - $\cos(\alpha - \beta) = \cos\alpha\cos\beta + \sin\alpha\sin\beta$