1. Verify the identity as either invalid or valid.

= sin t + cos t

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3 cos2 θ + cos θ – 2 = 0.

1. Make the trig substitution x = a sec θ for 0 < θ < and a>0. Use fundamental identities to simplify the resulting expression. x3 .
2. Find all solutions of the equation (cos θ – 1)(sin θ + 1) = 0.
3. Find all solutions of the equation that are in the interval [0, 2π).

sin2x + sinx - 3 = 0

1. If α and β are acute angles such that cos α = and tan β = , find sin (α + β).
2. If tan α = and cot β = for a second-quadrant angle α and a third-quadrant angle β, find

tan (α – β).

1. Indicate whether the reduction formula is correct or incorrect.

cos (θ – π) = - cos θ

1. Indicate whether the following equation is an identity.

cos (θ + ) = (cos θ – sin θ)

1. Use an addition or subtraction formula to find the solutions of the equation that are in the interval

[0, π).

cos 8t cos 5t = - sin 8t sin 5t