# Unit 13: Solving Conditional Trig Equations

Content Area: **Mathematics**
Course(s): **PreCalc Trig A**
Time Period: **Semester 2**
Length: **3 weeks**
Status: **Published**

## Standards

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|---|---|
| MA.K-12.1 | Make sense of problems and persevere in solving them. |
| MA.F-TF.A.3 | Use special triangles to determine geometrically the values of sine, cosine, tangent for π/3, π/4 and π/6, and use the unit circle to express the values of sine, cosines, and tangent for π – $x$, π + $x$, and 2π – $x$ in terms of their values for $x$, where $x$ is any real number. |
| MA.F-TF.B.7 | Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context. |

## Enduring Understandings

Students will understand that trig equations have solutions but at times may have extraneous solutions.

They will need to think critically of when it makes sense for them to check for extraneous solutions.

## Essential Questions

What strategies are used to solve trig equations?

How do we know when to check our answers to these types of problems?

## Knowledge and Skills

- Solve conditional trig equations.
- Check for extraneous solutions.
- Check for undefined solutions.

## Transfer Goals

Recognize and solve practical or theoretical problems involving mathematics, including those for which the

solution approach is not obvious, by using mathematical reasoning and strategic thinking.

## Resources

1. Pre-Calculus with Limits - Aufmann
2. Trigonometry 6th edition - Lial
3. Classkick
4. Khan Academy
5. PurpleMath
6. KutaSoftware
7. CK-12
8. Quizlet
9. Albert I/O
10. Desmos
11. Problem Attic