

Check answers (pink sheet)

7. C

8. C

9. D

10. B

11. B

12. D

19. C

20. D

21. A

22. A

recent notes:

Sum and Difference Identities:

$$\sin(x \pm y) = \sin x \cdot \cos y \pm \cos x \cdot \sin y$$

$$\cos(x \pm y) = \cos x \cdot \cos y \mp \sin x \cdot \sin y$$

$$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}$$

Note: for CSC, SEC, COT

→ find sin, cos, tan and then flip to find reciprocal

Double Angle Identities:

$$\sin 2\theta = 2\sin\theta\cos\theta$$

$$\begin{aligned}\cos 2\theta &= \cos^2\theta - \sin^2\theta \\ &= 1 - 2\sin^2\theta \\ &= 2\cos^2\theta - 1\end{aligned}$$

$$\tan 2\theta = \frac{2\tan\theta}{1 - \tan^2\theta}$$

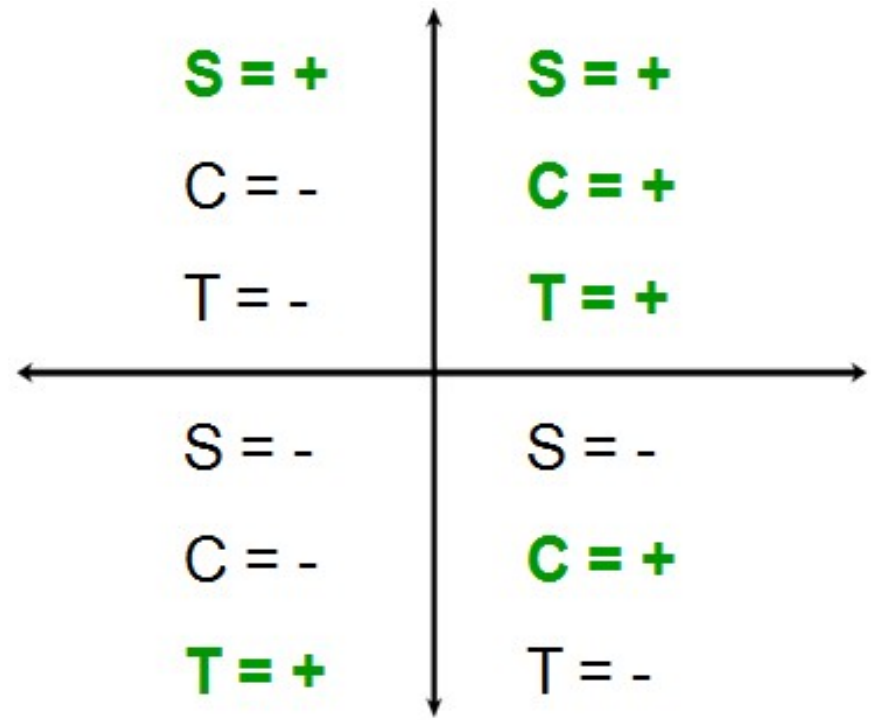
Half Angle Identities:

$$\sin \frac{x}{2} = \pm \sqrt{\frac{1 - \cos x}{2}}$$

$$\cos \frac{x}{2} = \pm \sqrt{\frac{1 + \cos x}{2}}$$

$$\tan \frac{x}{2} = \frac{1 - \cos x}{\sin x} \quad \text{or} \quad \frac{\sin x}{1 + \cos x}$$

$\theta =$	30°	45°	60°
$\sin \theta$	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$
$\cos \theta$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$
$\tan \theta$	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$



PERSONAL STUDY PLAN - OVERVIEW

← [HONORS TRIG/PRECALCULUS, section 1, 2019-2020](#)

Looking for more review problems?

Stewart :: PreCalculus - 7e

About: The Personal Study Plan is a tool designed to provide a set of practice exercises for each chapter of your current course. Use the study plan as a review, or use it to help you assess your skills by following a personalized path through additional resources such as videos, practice problems, and passages from the text to help you build your foundation of knowledge.

Instructions: Use the Personal Study Plan to practice and review knowledge throughout this course.

1. If needed, expand a chapter to see the included sections.
2. To study a section, view **Tutorial** materials and take the Practice Quiz until you understand the material.
3. When you are ready, take the Chapter Quiz to demonstrate your knowledge.

Retake quizzes as often as needed. Taking a chapter quiz updates the practice quiz scores for that chapter. Your last quiz scores are shown below.

1: Fundamentals	Chapter Quiz	<input type="text" value="Not Attempted"/>
2: Functions	Chapter Quiz	<input type="text" value="Not Attempted"/>
3: Polynomial and Rational Functions	Chapter Quiz	<input type="text" value="Not Attempted"/>
4: Exponential and Logarithmic Functions	Chapter Quiz	<input type="text" value="Not Attempted"/>
5: Trigonometric Functions: Unit Circle Approach	Chapter Quiz	<input type="text" value="Not Attempted"/>
6: Trigonometric Functions: Right Triangle Approach	Chapter Quiz	<input type="text" value="Not Attempted"/>
7: Analytic Trigonometry	Chapter Quiz	<input type="text" value="Not Attempted"/>
7.1: Trigonometric Identities	Practice Quiz	<input type="text" value="Not Attempted"/>
7.2: Addition and Subtraction Formulas	Practice Quiz	<input type="text" value="Not Attempted"/>
7.3: Double-Angle, Half-Angle, and Product-Sum Formulas	Practice Quiz	<input type="text" value="Not Attempted"/>
7.4: Basic Trigonometric Equations	Practice Quiz	<input type="text" value="Not Attempted"/>
7.5: More Trigonometric Equations	Practice Quiz	<input type="text" value="Not Attempted"/>

HOME

SELECT COURSE

HONORS TRIG/PRECALCULUS, section 1

GO


My Assignments

No Current Assignments

[Past Assignments \(12\)](#)

Grades

Your final grade has not yet been posted

 [Personal Study Plan -- Stewart :: PreCalculus - 7e](#)

 [Resources](#)



 INSTRUCTOR




ROSENOW, DEBORAH

Pleasant Valley High School, CA



My Class Insights

Make the most of your time.

-  Target the topics you need to study.
-  See which topics you know.
-  Ace your exam.

[View My Class Insights](#)

Announcements

7.2 PART 2

#8,24,26,28,32,38,41,
51-54, 75-80

**NOTES:
SKIPPED THIS ASSIGNMENT
SEE CHECK ANSWER SHEET**

Using a Half-Angle Formula Find $\sin \frac{x}{2}$, $\cos \frac{x}{2}$, and $\tan \frac{x}{2}$

38. $\cos x = -\frac{4}{5}$, $180^\circ < x < 270^\circ$

Half Angle Identities:

$$\sin \frac{x}{2} = \pm \sqrt{\frac{1 - \cos x}{2}}$$

$$\cos \frac{x}{2} = \pm \sqrt{\frac{1 + \cos x}{2}}$$

$$\tan \frac{x}{2} = \frac{1 - \cos x}{\sin x} \quad \text{or} \quad \frac{\sin x}{1 + \cos x}$$

41. $\sec x = \frac{3}{2}$, $270^\circ < x < 360^\circ$

Proving Identities **VERIFY!!**

$$75. (\sin x + \cos x)^2 = 1 + \sin 2x$$

$$76. \cos^4 x - \sin^4 x = \cos 2x$$

$$77. \frac{2 \tan x}{1 + \tan^2 x} = \sin 2x$$

$$78. \frac{1 - \cos 2x}{\sin 2x} = \tan x$$

$$79. \tan\left(\frac{x}{2}\right) + \cos x \tan\left(\frac{x}{2}\right) = \sin x$$

$$80. \tan\left(\frac{x}{2}\right) + \csc x = \frac{2 - \cos x}{\sin x}$$

Double Angle Identities:

$$\sin 2\theta = 2\sin\theta\cos\theta$$

$$\begin{aligned}\cos 2\theta &= \cos^2\theta - \sin^2\theta \\ &= 1 - 2\sin^2\theta \\ &= 2\cos^2\theta - 1\end{aligned}$$

$$\tan 2\theta = \frac{2\tan\theta}{1 - \tan^2\theta}$$

Half Angle Identities:

$$\sin\frac{x}{2} = \pm\sqrt{\frac{1 - \cos x}{2}}$$

$$\cos\frac{x}{2} = \pm\sqrt{\frac{1 + \cos x}{2}}$$

$$\tan\frac{x}{2} = \frac{1 - \cos x}{\sin x} \quad \text{or} \quad \frac{\sin x}{1 + \cos x}$$