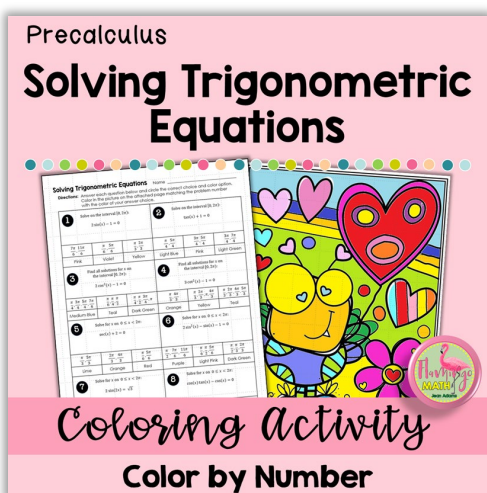


Solving Trigonometric Equations

Coloring Activity

Color by Number

Solving Trigonometric Equations Color By Number



KEY CONCEPTS/TOPICS:

- ★ Solve trigonometric equations for specified domains
- ★ Solve trigonometric equations for general solutions

Standards:

AP Pre-Calculus CED: Topic 3.10.A.1 to Topic 3.10.A.3

GENERAL DIRECTIONS:

Students will work sixteen questions related to Unit 3 Learning Objectives for AP Precalculus: Solving Trigonometric Equations. Then choose the correct answer with an indicated color option to complete the Coloring Page.

Product Overview

Solving Trigonometric Equations Color By Number

This engaging Color by Number Activity can be used after Topic 3.10 in AP Precalculus. Students are given sixteen questions to review how to solve a variety of sine, cosine, and tangent equations. Students are provided an individual worksheet to record their work for accountability.

Students will have a page with questions to record work and answer choices, plus a Valentine-themed page in black and white to color, based on their answer choices.

Teacher Directions:

1. Copy pages 3-4 as a two-sided worksheet.
2. Copy page 5 for your student to color as they complete the worksheet problems 1-16.
3. Copy pages 6-7 as a two-sided worksheet if you want students to show work.

Directions for students:

Answer each question 1-16 related to solving Sine, Cosine, and Tangent Equations. Circle the correct choice and color option. Color in the picture on the attached page matching the problem number with the color of your answer choice.

FTC-Integration Color by Number Activity

Solving Trigonometric Equations

Directions: Answer each question below and circle the correct choice and color option. Color in the picture on the attached page matching the problem number with the color of your answer choice.

1 Solve on the interval $[0, 2\pi)$: $2 \sin(x) - 1 = 0$	2 Solve on the interval $[0, 2\pi)$: $\tan(x) + 1 = 0$
$\frac{7\pi}{6}, \frac{11\pi}{6}$ Pink	$\frac{\pi}{6}, \frac{5\pi}{6}$ Violet
3 Find all solutions for x on the interval $[0, 2\pi)$: $2 \cos^2(x) - 1 = 0$	4 Find all solutions for x on the interval $[0, 2\pi)$: $3 \cot^2(x) - 4 = 0$
$\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$ Medium Blue	$\frac{\pi}{6}, \frac{5\pi}{6}, \frac{3\pi}{2}$ Teal
5 Solve for x on $0 \leq x < 2\pi$: $\sec(x) + 3 = 0$	6 Solve for x on $0 \leq x < 2\pi$: $2 \sin^2(x) - \sin(x) - 1 = 0$
$\frac{\pi}{6}, \frac{5\pi}{6}$ Lime	$\frac{2\pi}{3}, \frac{4\pi}{3}$ Orange
7 Solve for x on $0 \leq x < 2\pi$: $2 \sin(2x) = \sqrt{3}$	8 Solve for x on $0 \leq x < 2\pi$: $\cos(x) \tan(x) - \cos(x) = 0$
$\frac{\pi}{3}, \frac{2\pi}{3}, \frac{4\pi}{3}, \frac{5\pi}{3}$ Dark Pink	$\frac{\pi}{6}, \frac{5\pi}{6}, \frac{3\pi}{2}$ Yellow

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9 Solve on the interval $[0, 2\pi)$: $2 \cos^2(x) = 3 \sin(x) - 3 = 0$	10 Find the general solutions for: $\sqrt{3} \tan(x) - 1 = 0$
$\frac{\pi}{6}, \frac{5\pi}{6}, \frac{7\pi}{6}, \frac{11\pi}{6}$ Dark Green	$\frac{\pi}{3} + n\pi$ Lime
11 Find the general solutions for: $2 \sin(3x) = 1$	12 Find the general solutions for: $\tan^2(x) - 3 = 0$
$\frac{\pi}{16} + n\pi, \frac{7\pi}{16} + n\pi$ Light Violet	$\frac{\pi}{6} + n\pi, \frac{5\pi}{6} + n\pi$ Blue
13 Find the general solutions for: $\tan^2(x) - 3 = 0$	14 Find the general solutions for: $2 \cos\left(\frac{x}{2}\right) - \sqrt{3} = 0$
$\frac{\pi}{6} + n\pi, \frac{5\pi}{6} + n\pi$ Lime	$\frac{\pi}{3} + 4n\pi, \frac{11\pi}{3} + 4n\pi$ Lime
15 Find the general solutions for: $\sin(x) + 1 = \cos(x)$	16 Find the general solutions for: $2 \sin\left(\frac{x}{3}\right) + \sqrt{2} = 0$
$n\pi, \frac{\pi}{2} + n\pi$ Peach	$\frac{3\pi}{4} + 6n\pi, \frac{7\pi}{4} + 6n\pi$ Dark Pink

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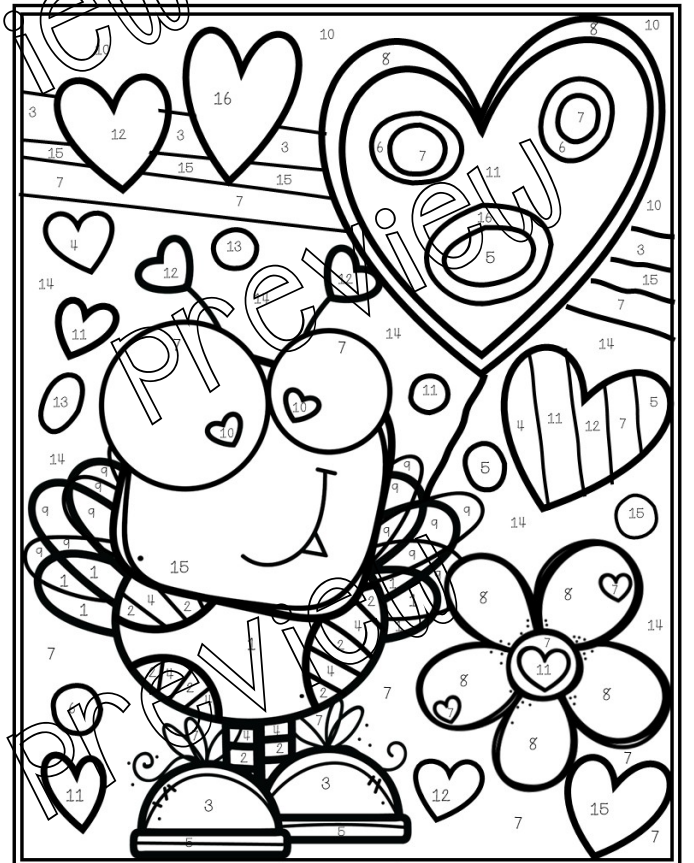
FTC-Integration Task Cards

Name: _____

Directions: Use this sheet to record your answers for the task cards below.

1.	2.
3.	4.
5.	6.
7.	8.

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