



TRIGONOMETRIC

Equations

FLY-SWATTER BINGO



TRIGONOMETRIC EQUATIONS

Fly-Swatter Bingo!

Objective: Students will practice solving trigonometric equations with this "Fly-Swatter" PowerPoint Game. Types of problems include basic isolation, factoring, and using identities (Pythagorean, half-angle, double-angle, sum of angles, difference of angles, and sum-to-product). All solutions are given in radians. If using this resource alongside my [Pre-Calculus Curriculum](#), it works very well as a review or practice before Quiz 6-3.

Directions:

- 1) Distribute a student recording worksheet and bingo board to each student. There are 30 boards included; if you have more than 30 students, simply repeat a board.
- 2) Distribute a recording worksheet to each student to write down and solve equations as they appear. There are only 18 problems on the board because there is almost always a winner by this point. If you need to keep going, they can continue their work on the back.
- 3) Open the PowerPoint game to run. Click on any fly (or let the students throw a Koosh ball to pick a fly). Students solve the problem at their desk. You can also choose to work through the problems with the students as they come up, or choose a student to work the problem at the board while the other students work at their desk.
- 4) Click "Answer" to display the answer. Students look for this answer on their bingo board and cross it off. Click back to return to the fly screen and repeat until there is a winner.

A student wins if they get 5 in a row, column, or diagonal. I typically awarded lollipops 😊.

TRIGONOMETRIC EQUATIONS BINGO!
 Directions: Solve the problems as they appear on the board in the spaces below. Find your solution on the bingo board and mark the space. If you get 5 in a row, column, or diagonal, you win!

1 2
3 4

Find all solutions for the given interval:
 $\tan^2\theta + 5 = 4\sec\theta$
 $[\pi, 2\pi)$

ANSWER

Find all solutions for the given interval:
 $\sin 2\theta = -\sqrt{3}\sin\theta$
 $[\pi, 2\pi)$

ANSWER

Find all solutions for the given interval:
 $1 = \cos 2\theta + 3\cos\theta + 3$
 $[0, 2\pi)$

ANSWER

Find all solutions for the given interval:
 $\sin 2\theta = \sin 4\theta$
 $[\frac{\pi}{2}, \pi]$

ANSWER

TRIGONOMETRIC EQUATIONS BINGO!

$(\frac{\pi}{4}, \frac{3\pi}{4})$	$(\frac{\pi}{2}, \frac{7\pi}{6}, \frac{11\pi}{6})$	$(\frac{\pi}{2}, \frac{5\pi}{6}, \pi)$	$(\frac{5\pi}{6}, \frac{7\pi}{6})$	$(\frac{\pi}{3}, \frac{5\pi}{3})$
$(\frac{5\pi}{3}, \frac{11\pi}{6})$	$(0, \frac{2\pi}{3})$	$(\frac{\pi}{4}, \frac{7\pi}{4})$	$(\frac{11\pi}{6})$	$(\frac{3\pi}{2})$
$(\frac{5\pi}{4}, \frac{7\pi}{4})$	$(\frac{2\pi}{3}, \frac{4\pi}{3})$	$(\frac{5\pi}{3})$	$(\frac{3\pi}{4}, \frac{5\pi}{4})$	$(\frac{\pi}{2}, \frac{5\pi}{6})$
$(\frac{\pi}{12}, \frac{\pi}{4}, \frac{5\pi}{12})$	$(\frac{4\pi}{3})$	$(0, \frac{4\pi}{3})$	$(\frac{7\pi}{4})$	$(\frac{\pi}{6}, \frac{7\pi}{6})$
$(\frac{7\pi}{6}, \frac{3\pi}{2})$	$(\frac{\pi}{6}, \frac{7\pi}{6})$	$(\frac{\pi}{3}, \pi)$	$(0, \frac{\pi}{6}, \frac{5\pi}{6})$	$(\frac{\pi}{2})$

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