

Trigonometry Matching Activity



Trigonometry Review Matching Activity



KEY CONCEPTS/TOPICS:

Review concepts and learning objectives for Trigonometric Functions and Graphs unit.

GENERAL DIRECTIONS:

Students work cooperatively to match two cards that correspond to the review of unit topics. There are 30 matching sets in the activity.

Product Overview

Trigonometry Review Matching Activity

This is a task card activity that is designed to help your PreCalculus students review key concepts related to the topics for your unit on Trigonometric Functions and Graphs. There are 30 questions in the activity, with 60 total cards in the set. Students are provided a recording sheet to support their work.

About this Activity:

Your PreCalculus students will have 60 task cards containing 30 questions that match in pairs for a skills review on topics related to Trigonometric Functions and Graphs. There are a wide variety of questions that include the following tasks:

1. Convert from radians to degrees and vice versa.
2. Arc length formula
3. Right triangle trigonometry.
4. Unit circle values.
5. Analyze equations of trigonometric function graphs.
6. Amplitude, period, phase shift of trig graphs.
7. Evaluate inverse trigonometric function expressions.

Solutions will be found to spell out a funny phrase. Students can record their work on a student handout. There is also a black and white version of all matching expressions on a single sheet of paper if you do not want to copy the large, colorful task cards.

This is a fun approach to review trigonometric functions and concepts before the end of the unit on Trigonometric Functions and Graphs.

An answer key is provided.



Have a wonderful week!



 Jean

Product Pages

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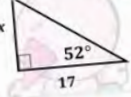
Convert to decimal form
 $87^{\circ} 2' 14''$

4

Convert 324° to radians.

7

Find x for the triangle below:



10

Find two coterminal angles, one positive and one negative for the angle $\beta = -76^{\circ}$

2

Use the arc length formula to find the radius r , given $s = 16$ cm, $\theta = 48^{\circ}$

5

Convert $\frac{32\pi}{9}$ to degree measure. Round answer to degree.

8

Find the measure of side b if $\angle A = 57^{\circ}$ and $c = 22$

11

Suppose θ is in standard position and $(5, -7)$ is on the terminal side of θ . Find $\cot \theta$.

3

In a right triangle, find $\cot \theta$, if $\sin \theta = \frac{2}{3}$

6

Find the angle in Quadrant I where $\sin \theta = \frac{\sqrt{3}}{2}$

9

From the distance of 50 feet from the base of a building, the angle of elevation top of the building is estimated. Estimate the height of the building to the nearest foot.

12

From a boat on the water, the angle of elevation to the top of a lighthouse is 30° . The distance from the boat to the base of the lighthouse is 100 feet. Estimate the height of the lighthouse to the nearest foot.

16

Find the value for θ , between $[0, 2\pi)$ where $\sin \theta = \frac{\sqrt{3}}{2}$ and $\tan \theta < 0$.

19

Find the phase shift of the function $y = 2\sin(3x - \pi)$

22

Name the quadrant in which the angle θ lies if $\tan \theta < 0$ and $\sin \theta > 0$.

25

Determine the period of the function $y = -4 \cos \left(\frac{3}{2}x \right)$

17

Find the amplitude of the function $y = -5 \sin(2x)$

20

Find the exact value of the expression $\sin \left(\cos^{-1} \left(\frac{-8}{17} \right) \right)$

23

Find the exact value of the expression $3 \cos \left(\frac{\pi}{4} \right) + 2 \tan \left(\frac{3\pi}{4} \right)$

26

Name the quadrant in which the angle θ lies if $\cot \theta > 0$ and $\sec \theta < 0$.

18

Find the period of the function $y = -5 \cos \left(\frac{1}{4}x \right)$

21

Find values for x , $-2\pi \leq x \leq 2\pi$, where $\sec x = -1$

24

Find the exact value of the expression $\tan \left(\sin^{-1} \left(-\frac{1}{2} \right) \right)$

27

Find the exact value of the expression: $6 \sin 270^{\circ} + 3 \cos 180^{\circ}$

A

$\frac{4\pi}{3}$

D

$\frac{\sqrt{33}}{7}$

E

$284^{\circ}, -436^{\circ}$

I

$\frac{9\pi}{5}$

J

$\frac{\sqrt{3}}{3}$

A

$-\pi, \pi$

D

$\frac{3\sqrt{2}-4}{2}$

E

$\frac{5}{2}$

I

$\left(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2} \right)$

K

-9

C

III

E

$\frac{\sqrt{13}}{3}$

G

$\frac{\sqrt{5}}{2}$

I

II

L

$\frac{15}{17}$

M

87.04°

O

509

S

$\frac{5}{7}$

V

124

Y

$\frac{60}{\pi} \approx 19.09$

N

8π

P

$\frac{\pi}{3}$

S

$\frac{\pi}{4}$

W

21.76

U

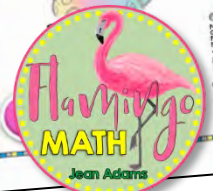
40°

V

$\sqrt{5}$

X

-1



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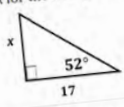
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1. Convert to decimal form
 $87^{\circ} 2' 14''$

4. Convert 324° to radians.

7. Find x for the triangle below:



10. Find two coterminal angles, one positive and one negative for the angle $\beta = -76^{\circ}$

13. Find the exact value for $\cos(7\pi)$

16. Find the value for θ , between $[0, 2\pi)$ where $\sin \theta = \frac{\sqrt{3}}{2}$ and $\tan \theta < 0$.

19. Find the phase shift of the function $y = 2\sin(3x - \pi)$

2. Use the arc length formula to find the radius r , given $s = 16$ cm, $\theta = 48^{\circ}$

5. Convert $\frac{32\pi}{9}$ to degree measure. Round answer to degree.

8. Find the measure of side b if $\angle A = 57^{\circ}$ and $c = 22$

11. Suppose θ is in standard position and $(5, -7)$ is on the terminal side of θ . Find $\cot \theta$.

14. Find $\sin \theta$ if $\cos \theta = \frac{4}{7}$ and $\tan \theta < 0$.

17. Find the amplitude of function $y = -5 \sin(\dots)$

20. Find the exact value of expression $\sin\left(\cos^{-1}\left(\frac{1}{2}\right)\right)$

3. In a right triangle, find $\cot \theta$, if $\sin \theta = \frac{2}{3}$

6. Find the angle in Quadrant I where $\sin \theta = \frac{\sqrt{5}}{2}$

9. From the distance of 50 feet from the base of a building, the angle of elevation to the top of the building is 68° . Estimate the height of the building to the nearest foot.

12. Name the point on the terminal side of the angle $\theta = \frac{5\pi}{4}$

15. From a boat on a lake, the angle of elevation to the top of a cliff is $31^{\circ} 41'$. If the boat is 825 feet from the base of the cliff, how high is the cliff to the nearest foot?

22. Name the quadrant in which the angle θ lies if $\tan \theta < 0$ and $\sin \theta > 0$.

25. Determine the period of the function $y = -4 \cos\left(\frac{3}{2}x\right)$

23. Find the exact value of the expression $3\cos\left(\frac{\pi}{4}\right) + 2\tan\left(\frac{3\pi}{4}\right)$

26. Name the quadrant in which the angle θ lies if $\cot \theta > 0$ and $\sec \theta < 0$.

24. Find the exact value of the expression $\tan\left(\sin^{-1}\left(-\frac{1}{2}\right)\right)$

27. Find the exact value of the expression: $6 \sin 270^{\circ} + 3 \cos 180^{\circ}$

30. Evaluate: $\arcsin\left(\frac{\sqrt{2}}{2}\right)$

A $\frac{4\pi}{3}$

D $-\frac{\sqrt{33}}{7}$

E $284^{\circ}, -436^{\circ}$

I $\frac{9\pi}{5}$

J $-\frac{\sqrt{3}}{3}$

L $\frac{\pi}{3} = 60^{\circ}$

O 12

A $-\pi, \pi$

D $\frac{3\sqrt{2}-4}{2}$

E 5

I $\left(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}\right)$

K -9

M 87.04°

O 509

C III

E $\frac{\sqrt{13}}{3}$

G $\frac{\sqrt{5}}{2}$

I II

L $\frac{15}{17}$

N 8π

P $\frac{\pi}{3}$

S $\frac{\pi}{4}$

V 21.76

W $\frac{2\pi}{3} = 120^{\circ}$

16

17

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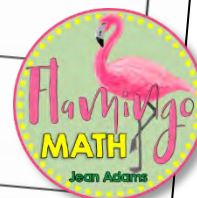
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SOLVING TRIGONOMETRIC EQUATIONS MAZE



FUN MAZE ACTIVITY

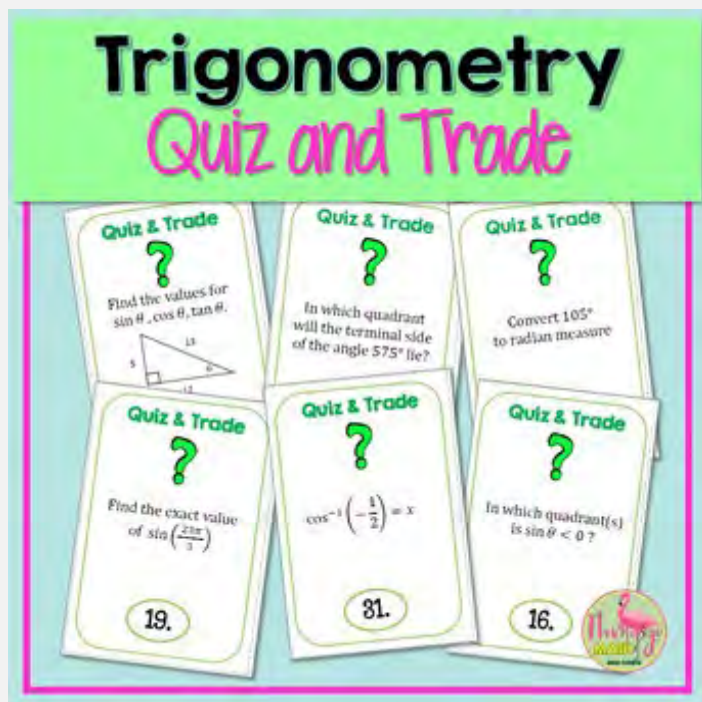
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Exponential & Logarithmic Functions

Trigonometry Quiz and Trade



Quiz & Trade

Find the values for $\sin \theta$, $\cos \theta$, $\tan \theta$.

In which quadrant will the terminal side of the angle 575° lie?

Convert 105° to radian measure

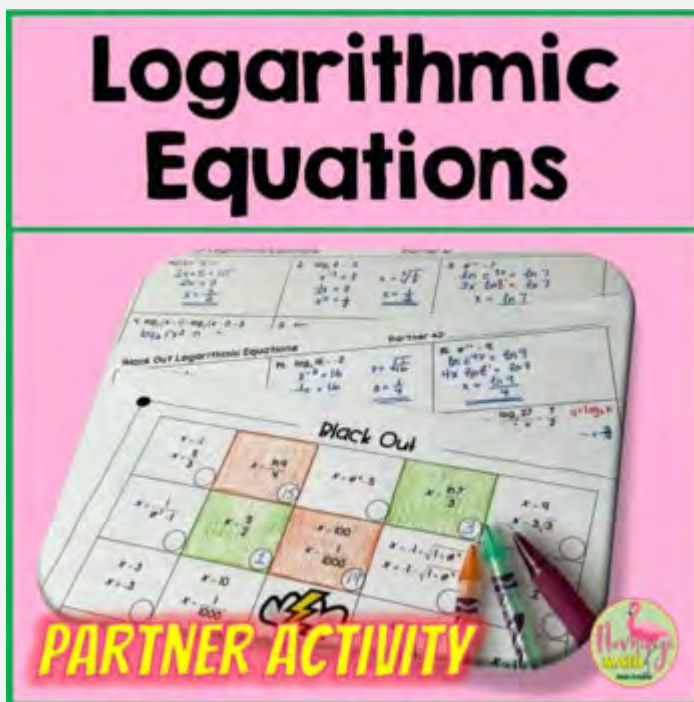
Find the exact value of $\sin\left(\frac{2\pi}{3}\right)$

$\cos^{-1}\left(-\frac{1}{2}\right) = x$

In which quadrant(s) is $\sin \theta < 0$?

19. 31. 16.

Logarithmic Equations



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