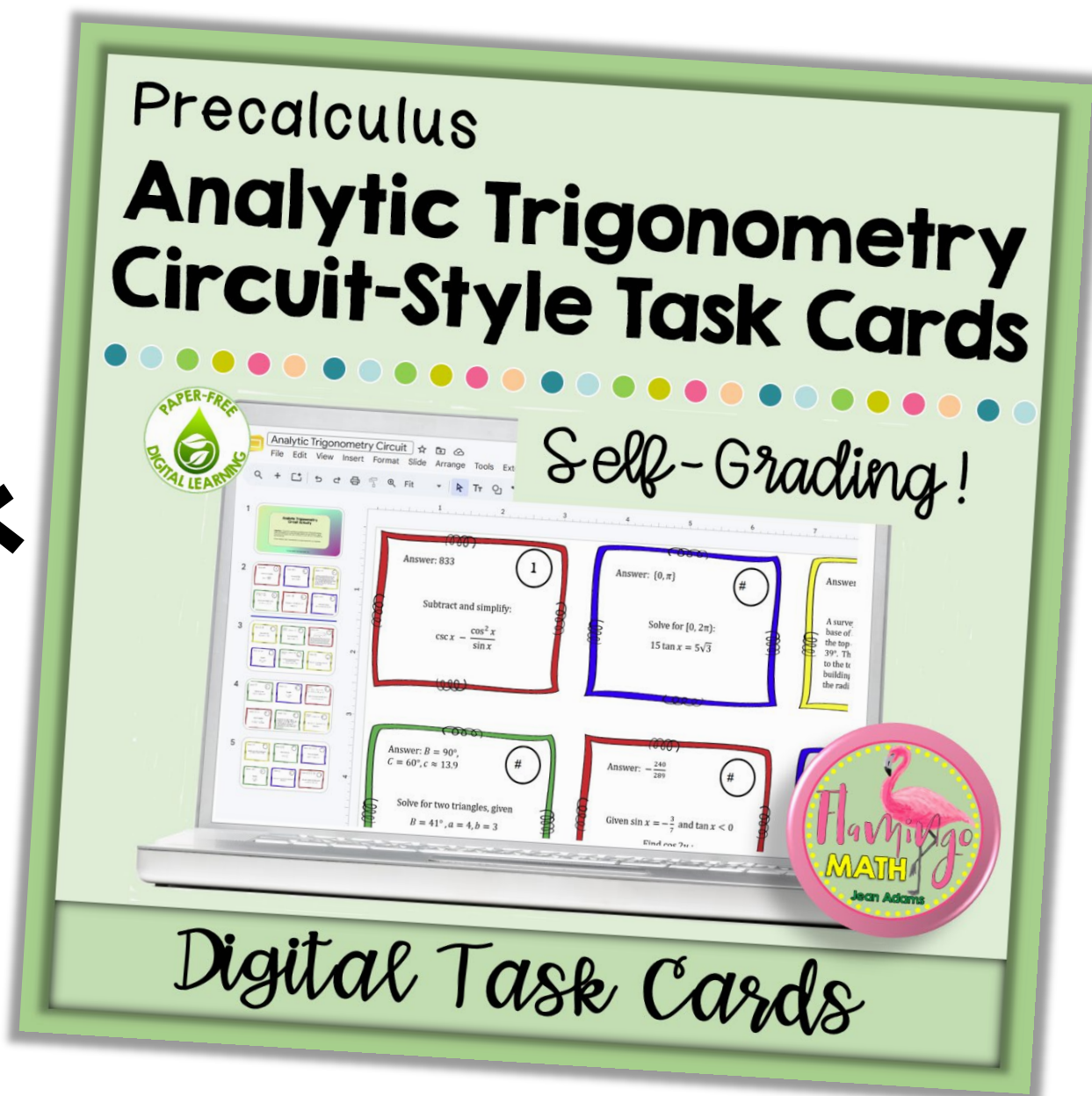
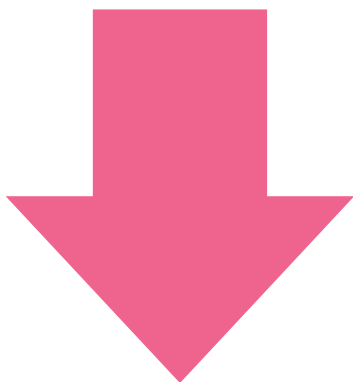
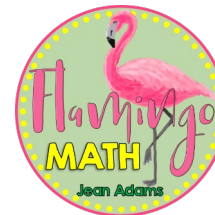


Precalculus Circuit-Style Digital Task Cards

Self-Grading
Digital
No Prep Quiz

Take a look
inside!





Analytic Trigonometry Circuit Activity

Directions: This activity contains 24 questions that will be self-grading. Start with question #1 on the first slide, search for your answer. Label that block as question #2 and continue to work until you complete the entire circuit.

W

Answer: 833 (1)

Subtract and simplify:
 $\cot x - \frac{\cos^2 x}{\sin x}$

Answer: $\{0, \pi\}$ (#)

Solve for x (2π):
 $15 \tan x = 5\sqrt{3}$

Answer: 7.56 (#)

A surveyor standing 58 meters from the base of a building measures the angle to the top of the building and finds it to be 39° . The surveyor then measures the angle to the top of the radio tower on the building and finds that it is 48° . How tall is the radio tower?

Answer: $B = 90^\circ$,
 $C = 60^\circ$, $c \approx 13.9$ (#)

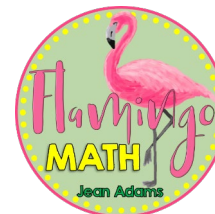
Solve for two triangles, given
 $B = 41^\circ$, $a = 4$, $b = 3$

Answer: $-\frac{240}{289}$ (#)

Given $\sin x = -\frac{3}{7}$ and $\tan x < 0$
Find $\cos 2u$:

Answer: $2 \csc^2 x$ (#)

Factor and Simplify:
 $\sin^2 x + 2 \sin x \cos x + \cos^2 x$



Answer: $\left\{\frac{\pi}{6}, \frac{7\pi}{6}\right\}$

#

Solve for $[0, 2\pi)$:
 $\sin x \cos x = -\cos x$

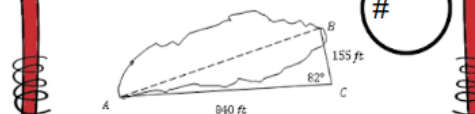
Answer:
 $(2 \cos x - 1)(\cos x - 1)$

#

Factor and Simplify:
 $2 \sin^2 x + \sin x - 1$

Answer: 198.7

#



Rachel must find the distance from A to B on opposite sides of a lake. She locates a point C that is 840 feet from A and 155 ft from B. Her angle at C measures 82° . What is the distance across the pond to the nearest foot?

Answer: $\sin x \tan x$

Simplify:
 $\frac{\sin x - \csc x}{\csc x}$

Answer: $A \approx 140^\circ, B \approx 24^\circ$

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

#

Solve for $[0, 2\pi)$:
 $3 \sin x - \sin x = 0$

Answer: $\sin x$

#

Simplify:
 $\frac{1 - \cos x}{\cos x}$

Answer:

#

$61^\circ, C_1 = 78^\circ, c_1 \approx 4.5$
 $A_2 = 119^\circ, C_2 = 20^\circ, c_2 \approx 1.6$

Solve the triangle if possible, given
 $a = 16, b = 10, c = 7$

Answer: $\sec x + 1$

#

Add and Simplify:
 $\frac{1}{1 - \cos x} + \frac{1}{1 + \cos x}$

Answer: 17.45

#

Two sailboats leave a harbor in the Bahamas at the same time. The first sails at 23 mph in a direction 330° . The second sails at 34 mph in a direction 210° . Assuming that both boats maintain speed and heading, after 4 hours, how far apart are the boats?

Answer:
 $(2 \sin x - 1)(\sin x + 1)$

#

Given $\cos x = -\frac{8}{17}$ and $\tan x < 0$

Find $\sin 2u$: