9.3 Evaluating Trig Functions

Pre-Calculus

Write your
questions here!

This section requires the Unit Circle and Table from last section.
(You can print one from the website underneath the video)

EXACT VALUES

Use the table!

$\cos 150°$ $\qquad$ $\csc \dfrac{2\pi}{3}$ $\qquad$ $\tan -270°$ $\qquad$ $\sin 405°$

APPROXIMATE VALUES

Use the calculator!

$\cos 150°$ $\qquad$ $\sec 210°$ $\qquad$ $\cot \dfrac{5\pi}{6}$ $\qquad$ $\csc 170°$

FINDING θ where $0° \leq \theta \leq 360°$

Inverse Trig using the table!

$\cos \theta = \dfrac{1}{2}$

$\tan \theta = -\sqrt{3}$

FINDING θ where $0° \leq \theta \leq 360°$

Inverse Trig using the calculator!

$\cos \theta = 0.2079$ $\qquad$ $\csc \theta = -1.2062$ $\qquad$ $\cot \theta = 1.42$

CALCULATOR!

TRY IT!

1. $\cos 234° =$

2. $\csc 128° =$

3. $\cot(-28°) =$

Find θ where $0° \leq \theta \leq 360°$. Round to the nearest hundredth.

4. $\cos\theta = -0.8481$

5. $\csc\theta = 1.43$

6. $\sin\theta = 1.2$

SUMMARY:

Now, summarize your notes here!

Skillz Review! Let's put some Trig in our Algebra!

SEPARATE FRACTIONS		
$\dfrac{x+10}{2} =$	$\dfrac{\sin x + 1}{\sin x} =$	$\dfrac{\sin^2\theta - \sec\theta}{\cos\theta} =$
MULTIPLY		
$\dfrac{3}{4} \cdot \dfrac{5}{3} =$	$\cos x \cdot \dfrac{1}{\cos x} =$	$\tan\theta \cdot \cos\theta =$

9.3 Evaluating Trig Functions

Use the table to find the EXACT value.

1. csc 135°	2. sin π	3. cot$\left(-\frac{11\pi}{6}\right)$	4. sec(−90°)
5. sin 315°	6. sin$\frac{7\pi}{6}$	7. tan 765°	8. cot$-\frac{19\pi}{6}$
9. csc −135°	10. cos −900°	11. sec −690°	12. tan$\frac{11\pi}{6}$

Use the calculator to find the APPROXIMATE value of each.

13. csc 80°	14. cot 15°	15. sec 40°	16. sin 51°
17. sin$\frac{\pi}{18}$	18. tan$\frac{7\pi}{18}$	19. cot$\frac{23\pi}{90}$	20. cot$\frac{\pi}{5}$
21. csc$\frac{\pi}{18}$	22. sec 115°	23. csc$\frac{5\pi}{18}$	24. sin 1.2

Use the table to find each angle where $0° \leq \theta \leq 360°$.

25. cos θ = $-\frac{1}{2}$	26. csc θ = $\frac{2\sqrt{3}}{3}$	27. tan θ = undefined	28. sin θ = $-\frac{\sqrt{2}}{2}$
29. csc θ = 1	30. sec θ = $\sqrt{2}$	31. tan θ = 0	32. sin θ = 0

Use the calculator to find each angle where $0° \leq \theta \leq 360°$. Round to the nearest hundredth.

33. cos θ = 0.7314	34. sin θ = −0.9336	35. tan θ = 0.4245

Use the calculator to find each angle where $0° \leq \theta \leq 360°$. Round to the nearest hundredth.		
36. $\sec \theta = -1.589$	37. $\cot \theta = 0.30573$	38. $\csc \theta = 1.0306$
39. $\tan \theta = 1.156$	40. $\sin \theta = -0.6254$	41. $\cot \theta = -0.484$
42. $\sec \theta = -1.68$	43. $\tan \theta = 1.2$	44. $\csc \theta = 1.23$

1. **Find the exact value.**

$$\sec \frac{2\pi}{3}$$

2. **Use the calculator to find each angle where $0° \le \theta \le 360°$.**

$$\cot \theta = -1.78$$

AWESOME MATH PUZZLE TIME!!!

Mr. Sullivan's favorite holiday is Valentine's Day. Normally he likes to give his special someone a box of Thin Mint Girl Scout Cookies. This year, Sully decides to UPGRADE!!! his Valentine's Day with a special math puzzle. Nothing says Happy Valentines like a math puzzle, Stars Wars themed valentine with a big heart on it. Don't be that guy who figures it out first then runs around telling people the answer. If you copy the answer of this puzzle from a friend then you are lame and will ruin Sully Valentine's Day. Solve each statement with your table when appropriate or your calculator to unlock the secret Valentine's Day code. Good Luck!

A	22°	F	60°	K	$\frac{\pi}{2}$	P	$\frac{1}{2}$	U	$-\frac{1}{2}$
B	38°	G	90°	L	$\frac{\pi}{3}$	Q	$\frac{\sqrt{2}}{2}$	V	0
C	42°	H	120°	M	$\frac{\pi}{6}$	R	$\frac{\sqrt{3}}{2}$	W	1
D	1.11	I	45°	N	$\frac{\pi}{4}$	S	$-\frac{\sqrt{2}}{2}$	X	−1
E	1.25	J	30°	O	$\frac{2\pi}{3}$	T	$-\frac{\sqrt{3}}{2}$	Y	undefined

HAPPY VALENTINES DAY!

$\sec 90°$	$\cos^{-1}\left(-\frac{1}{2}\right)$ radians	$\cot 42°$	$\sec^{-1}(1.078534)$ degrees

$\sec^{-1}(-2)$ radians	$\tan^{-1}(1)$ radians	$\csc 53°$

Reference angle for 240°	$\csc^{-1}\left(\frac{2\sqrt{3}}{3}\right)$ radians	$\cos \frac{11\pi}{6}$

Reference angle for $\frac{5\pi}{6}$	$\sec 37°$