

# AP Precalculus - Session 1

## Daily Assignment (Independent Practice)

Wednesday, January 7, 2026 | DUE: End of Class

Name: \_\_\_\_\_ Period: \_\_\_\_\_

**Instructions:** Show all work. Answers without work may not receive full credit.

**Calculator:** Allowed for checking, but show exact answers where possible.

### PART A: RIGHT TRIANGLE TRIGONOMETRY (15 problems)

**Problems 1-10:** Find the three trigonometric ratios for angle  $\theta$ .

#	Opposite	Adjacent	Hypotenuse	$\sin(\theta)$	$\cos(\theta)$	$\tan(\theta)$
1	3	4	5			
2	5	12	13			
3	8	15	17			
4	7	24	25			
5	9	40	41			
6	20	21	29			
7	11	60	61			
8	13	84	85			
9	6	8	10			
10	15	20	25			

**Problems 11-15:** Given one or two trig values, find the third.

11. If  $\sin(\theta) = 3/5$  and  $\cos(\theta) = 4/5$ , find  $\tan(\theta)$ . \_\_\_\_\_

12. If  $\sin(\theta) = 5/13$  and  $\cos(\theta) = 12/13$ , find  $\tan(\theta)$ . \_\_\_\_\_

13. If  $\sin(\theta) = 8/17$  and  $\cos(\theta) = 15/17$ , find  $\tan(\theta)$ . \_\_\_\_\_

14. If  $\sin(\theta) = 7/25$  and  $\cos(\theta) = 24/25$ , find  $\tan(\theta)$ . \_\_\_\_\_

15. If  $\sin(\theta) = 9/41$  and  $\cos(\theta) = 40/41$ , find  $\tan(\theta)$ . \_\_\_\_\_

## PART B: DEGREE-RADIAN CONVERSIONS (15 problems)

**Problems 16-22:** Convert from degrees to radians. Leave answers in terms of  $\pi$ .

#	Degrees	Work/Formula	Radians
16	$30^\circ$		
17	$45^\circ$		
18	$60^\circ$		
19	$90^\circ$		
20	$120^\circ$		
21	$135^\circ$		
22	$150^\circ$		

**Problems 23-30:** Convert from radians to degrees.

#	Radians	Work/Formula	Degrees
23	$\pi/6$		
24	$\pi/4$		
25	$\pi/3$		
26	$\pi/2$		
27	$2\pi/3$		
28	$3\pi/4$		
29	$5\pi/6$		
30	$7\pi/6$		

## **BONUS QUESTION (+2 points)**

Explain in your own words (3-5 sentences): Why does radian measure make sense mathematically?  
Why is it considered 'natural'?

Your explanation:

### ***Self-Assessment:***

Circle your confidence level with today's material:

1 - Need more help | 2 - Getting it | 3 - Confident | 4 - Could teach someone else