

Pre-AP Precalculus
WS – Sum & Difference Identities
Spring 2019

Name _____

Date _____ Per _____

Give exact values for the following

1. $\sin \frac{11\pi}{12}$

2. $\cos \frac{\pi}{12}$

3. $\tan \frac{7\pi}{12}$

4. $\cot \frac{15\pi}{12}$

5. $\sin \frac{17\pi}{12}$

6. $\cos \frac{11\pi}{12}$

7. $\tan \frac{\pi}{12}$

8. $\sec \frac{\pi}{12}$

9. $\csc \frac{5\pi}{12}$

10. $\tan \frac{11\pi}{12}$

Given that $\sin \alpha = \frac{3}{5}$, $0 \leq \alpha \leq \frac{\pi}{2}$ and

$\cos \beta = -\frac{7}{25}$, $\pi \leq \beta \leq \frac{3\pi}{2}$ find

11. $\sin(\alpha + \beta)$

12. $\cos(\alpha + \beta)$

13. $\tan(\alpha + \beta)$

Given that $\sec \alpha = \frac{4}{3}$, $\frac{3\pi}{2} \leq \alpha \leq 2\pi$ and

$\tan \beta = \frac{\sqrt{33}}{4}$, $\pi \leq \beta \leq \frac{3\pi}{2}$ find

14. $\sin(\alpha + \beta)$

15. $\cos(\alpha + \beta)$

16. $\tan(\alpha + \beta)$

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____