

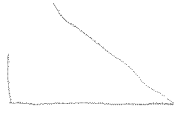
13.3 Tangent and Reciprocal Trigonometric Functions

Name KELU
Date _____ Block _____

Find each value.

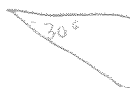
1. $\tan 135^\circ$

(-1)



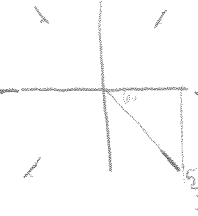
3. $\csc -\frac{\pi}{6}$

$\frac{1}{-\frac{1}{2}} = (-2)$



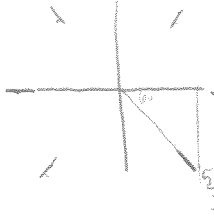
5. $\sec 210^\circ$

$\frac{1}{\frac{-2\sqrt{3}}{\sqrt{3}}} = (-\frac{2\sqrt{3}}{3})$



7. $\tan \frac{5\pi}{3}$

$\frac{\sin = -\frac{\sqrt{3}}{2}}{\cos = \frac{1}{2}} = (-\sqrt{3})$



9. $\csc (-390^\circ)$

$\frac{1}{-\frac{1}{2}} = (-2)$



11. $\cot (-87\pi)$

$\frac{\cos}{\sin} = \frac{-1}{0} = \text{undef.}$



2. $\sec \frac{\pi}{6}$

$\frac{1}{\cos 30} = \frac{1}{\frac{\sqrt{3}}{2}} = (\frac{2\sqrt{3}}{3})$

4. $\cot 210^\circ$

$\frac{(-\frac{\sqrt{3}}{2}, \frac{1}{2})}{-\frac{1}{2}} = (\sqrt{3})$

6. $\csc -\frac{3\pi}{4}$

$\frac{1}{-\frac{\sqrt{2}}{2}} = -\frac{2\sqrt{2}}{\sqrt{2}\sqrt{2}} = (-\sqrt{2})$

8. $\cot (-405^\circ)$

$\frac{(\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2})}{-\frac{\sqrt{2}}{2}} = (-1)$

10. $\sec 270^\circ$

$\frac{1}{0} = \text{UNDEF.}$

12. $\tan \frac{13\pi}{6}$

$\frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}} = (\frac{\sqrt{3}}{3})$

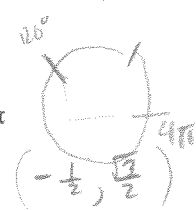
13. $\sec (-225^\circ)$

$\frac{1}{\frac{-2\sqrt{2}}{\sqrt{2}}} = (-\sqrt{2})$



14. $\csc 4\frac{2\pi}{3}$

$\frac{1}{\frac{2}{\sqrt{3}}} = \frac{\sqrt{3}}{2} = (\frac{2\sqrt{3}}{3})$



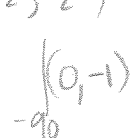
15. $\tan (-720^\circ)$

$\frac{\sin}{\cos} = \frac{0}{1} = (0)$



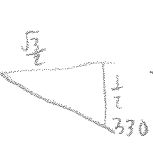
16. $\cot (-90^\circ)$

$\frac{0}{-1} = (0)$



17. $\sec 330^\circ$

$\frac{1}{\frac{2}{\sqrt{3}}} = \frac{\sqrt{3}}{2} = (\frac{2\sqrt{3}}{3})$



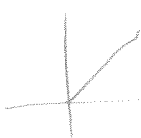
18. $\csc (-\frac{11\pi}{6})$

$\frac{1}{\frac{1}{2}} = 2 = (2)$



19. $\cot \frac{9\pi}{4}$

$\frac{\cos}{\sin} = (1)$



20. $\tan -\frac{3\pi}{4}$

$\frac{-\frac{\sqrt{2}}{2}}{-\frac{\sqrt{2}}{2}} = (1)$



$\frac{-\sqrt{3}}{2} / \frac{-\sqrt{3}}{2} = 1$

Tangent & Reciprocal Trigonometric Functions

HOMEWORK

Name _____

Date _____ Block _____

Find each value.

1. $\cot 135^\circ$ (-1)

2. $\csc 45^\circ$ $\frac{2}{\sqrt{2}} = (\sqrt{2})$

3. $\sec 300^\circ$ (2)

4. $\tan\left(-\frac{\pi}{3}\right)$ $(-\sqrt{3})$

5. $\csc(-210^\circ)$ (2)

6. $\tan \frac{7\pi}{6}$ $(\frac{\sqrt{3}}{3})$

7. $\cot(-60^\circ)$ $\frac{1}{-\sqrt{3}} = (-\frac{\sqrt{3}}{3})$

8. $\sec 240^\circ$ (-2)

9. $\cot\left(-\frac{\pi}{6}\right)$ $\frac{-3}{\sqrt{3}} = (-\sqrt{3})$

10. $\csc\left(-\frac{\pi}{6}\right)$ (-2)

11. $\sec(-120^\circ)$ (-2)

12. $\cot 210^\circ$ $(\sqrt{3})$

13. $\csc \frac{\pi}{2}$ (1)

14. $\tan \frac{9}{4}\pi$ (1)

15. $\tan\left(-\frac{5}{6}\pi\right)$ $(\frac{\sqrt{3}}{3})$

16. $\cot \frac{7\pi}{4}$ (-1)

17. $\tan(-300^\circ)$ $(\sqrt{3})$

18. $\cot 540^\circ$ (undefined)
 $= \cot 180^\circ$

19. $\sec(-30^\circ)$ $\frac{2}{\sqrt{3}} = (\frac{2\sqrt{3}}{3})$

20. $\tan 405^\circ$ (1)
 $= \tan 45^\circ$

21. $\csc 180^\circ$ (undefined)

22. $\sec 390^\circ$ $\frac{2}{\sqrt{3}} = (\frac{2\sqrt{3}}{3})$
 $= \sec 30^\circ$

23. $\cot(-600^\circ)$ $\frac{1}{-\sqrt{3}} = (-\frac{\sqrt{3}}{3})$
 $= \cot 120^\circ$

24. $\csc\left(-\frac{7}{6}\pi\right)$ (2)

25. $\frac{\tan 300^\circ}{\csc 540^\circ} = \frac{-\sqrt{3}}{\frac{1}{\sin 180^\circ}} = \frac{-\sqrt{3}}{\frac{1}{0}} = (\text{undefined})$

26. $\tan \frac{13\pi}{4} - \sec \pi$ $1 - (-1) = (2)$

27. $\csc\left(-\frac{5}{2}\pi\right) \sec\left(-\frac{11}{6}\pi\right) = \frac{-2}{\sqrt{3}} = (-\frac{2\sqrt{3}}{3})$
 $-1\left(\frac{2}{\sqrt{3}}\right)$