

SHOW ALL WORK.

Complete Parts A & B OR Parts B & C

PART A:

Find the exact values. Do not use a calculator.

1. $\sin 30$

2. $\cos 150$

3. $\sin -45$

4. $\tan 60$

5. $\cos \frac{\pi}{4}$

6. $\sin \frac{2\pi}{3}$

7. $\tan \pi$

8. $\sin -\frac{\pi}{3}$

PART B:

Find the exact values. Do not use a calculator.

9. $\sin -\frac{5\pi}{3}$

10. $\tan -\frac{2\pi}{3}$

11. $\cos 390$

12. $\sin -\frac{3\pi}{4}$

13. $\cos 0$

14. $\sin 11\pi$

15. $\tan \frac{11\pi}{6}$

16. $\cos -\frac{15\pi}{4}$

Find the value(s) of θ , that have the given function value. Give your answers in degrees ($0 \leq \theta < 360$) and radians ($0 \leq \theta < 2\pi$).

17. $\sin \theta = -\frac{\sqrt{2}}{2}$

18. $\cos \theta = \frac{1}{2}$

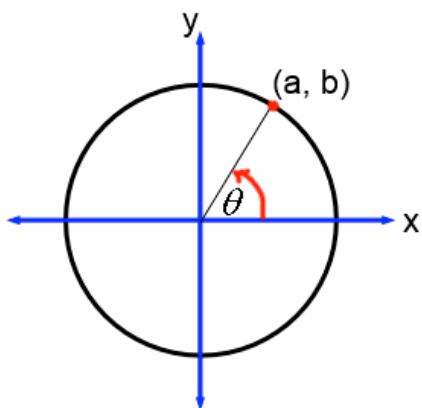
19. $\tan \theta = 0$

20. $\cos \theta = -1$

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

22. $\sin \theta = -\frac{\sqrt{3}}{2}$

Using the Unit Circle shown, give the expression for the value of the trigonometric function.



23. $\sin \theta$

24. $\cos(-\theta)$

25. $\tan \theta$

PART C:

Find the exact values. Do not use a calculator.

26. $\cot -\frac{4\pi}{3}$

27. $\sec 90$

28. $\csc -225$

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

30. $\sec -\frac{5\pi}{6}$

31. $\csc \frac{13\pi}{6}$

Using the Unit Circle in Part B, give the expression for the value of the trigonometric function.

32. $\sin(180 - \theta)$

33. $\cos(\theta + 180)$

34. $\tan(\theta + 540)$

Unit 6.5 Homework Answers

1. $\frac{1}{2}$

2. $-\frac{\sqrt{3}}{2}$

3. $-\frac{\sqrt{2}}{2}$

4. $\sqrt{3}$

5. $\frac{\sqrt{2}}{2}$

6. $\frac{\sqrt{3}}{2}$

7. 0

8. $-\frac{\sqrt{3}}{2}$

9. $\frac{\sqrt{3}}{2}$

10. $\sqrt{3}$

11. $\frac{\sqrt{3}}{2}$

12. $-\frac{\sqrt{2}}{2}$

13. 1

14. 0

15. $-\frac{\sqrt{3}}{3}$

16. $\frac{\sqrt{2}}{2}$

17. 225,315

18. 60,300

19. 0,180

20. 180

$\frac{5\pi}{4}, \frac{7\pi}{4}$

$\frac{\pi}{3}, \frac{5\pi}{3}$

0, π

π

21. 120,300

22. 240,300

23. b

24. a

25. $\frac{b}{a}$

$\frac{2\pi}{3}, \frac{5\pi}{3}$

$\frac{4\pi}{3}, \frac{5\pi}{3}$

26. $-\frac{\sqrt{3}}{3}$

27. *undefined*

28. $\sqrt{2}$

29. 1

30. $-\frac{2\sqrt{3}}{3}$

31. 2

32. b

33. $-a$

34. $\frac{b}{a}$