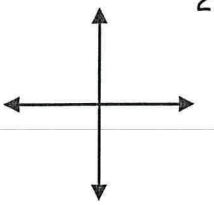
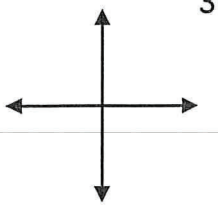
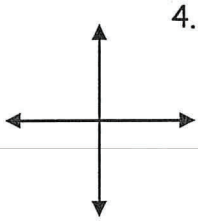
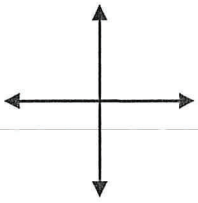
4.1: How do you use this???

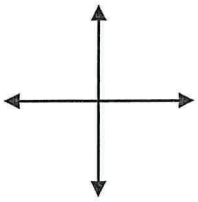
Sketch each angle in standard position and determine what quadrant it lies in.

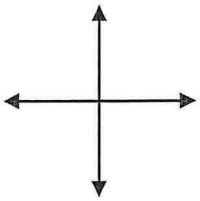
1. $130°$ 

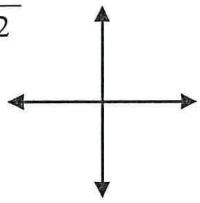
2. $-285°$ 

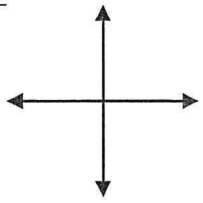
3. $8.3°$ 

4. $257°$ 

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

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

7. $\frac{5\pi}{2}$ 

8. $\frac{11\pi}{6}$ 

Write each angle in radian measure as a multiple of π.

1. $30°$

2. $-20°$

3. $150°$

4. $-240°$

Write each angle in degree measure.

1. $\frac{3\pi}{2}$

2. $\frac{7\pi}{6}$

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

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

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

6. $-\frac{11\pi}{30}$

Find one positive and one negative angle that are coterminal with an angle having the following measures.

1. $\frac{\pi}{6}$

2. $145°$

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

4. $190°$

5. $-\frac{2\pi}{15}$

If possible find the complement and supplement of the angle.

1. $\frac{\pi}{4}$

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

3. $80°$

4. $100°$

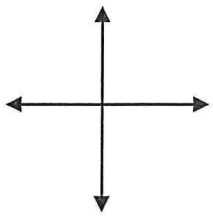
More Practice:

Determine the quadrant where the following angle lies.

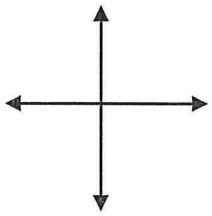
1. $\frac{3\pi}{4}$ 2. –1 radians 3. 45° 4. –125°

Sketch the angle in standard position.

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



6. 545°



Determine two coterminal angles. (one positive and one negative)

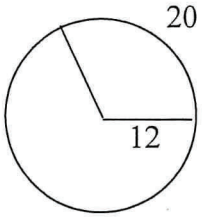
7. $\frac{\pi}{2}$ 8. 145°

Rewrite the angles in the other angle measure.

9. $\frac{3\pi}{5}$ 10. –3.24 radians 11. 250°

Find the angle in radians.

12.



13. r = 14 feet and s = 8 feet

14. Find the arc length given: r = 12mm and θ=330°

15. Determine the area of a field sprayed by a sprinkler that rotates 135° that has a spray length of 6 ft.

Practice Worksheet – Exact Values of Sine, Cosine, and Tangent

DETERMINE THE EXACT VALUE OF EACH OF THE GIVEN EXPRESSIONS:

1. $\cos\frac{\pi}{6}$
2. $\sin\frac{\pi}{4}$
3. $\tan\frac{\pi}{3}$
4. $\sin\frac{\pi}{2}$
5. $\tan\pi$
6. $\cos\frac{2\pi}{3}$
7. $\cos 0$
8. $\tan\frac{3\pi}{2}$
9. $\sin\frac{5\pi}{4}$
10. $\sin\frac{5\pi}{3}$
11. $\tan\frac{11\pi}{6}$
12. $\sin 0$
13. $\cos\frac{7\pi}{4}$
14. $\cos(\frac{-3\pi}{2})$
15. $\tan(\frac{-3\pi}{4})$
16. $\sin\frac{17\pi}{6}$
17. $\cos\frac{11\pi}{3}$
18. $\tan 100\pi$
19. $\sin(-\frac{\pi}{6})$
20. $\cos(\frac{-2\pi}{3})$
21. $\tan(\frac{-9\pi}{2})$

FIND ALL VALUES OF θ SUCH THAT $0 \le \theta \le 2\pi$ THAT MAKE EACH OF THE FOLLOWING GIVEN STATEMENTS TRUE:

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

23. $\cos\theta = \frac{\sqrt{3}}{2}$

24. $\tan\theta = 1$

25. $\cos\theta = 0$

26. $\tan\theta = \sqrt{3}$

27. $\sin\theta = -1$

28. $\tan\theta = \frac{-\sqrt{3}}{3}$

29. $\sin\theta = 0$

30. $\cos\theta = -1$

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

32. $\cos\theta = \frac{-\sqrt{2}}{2}$

33. $\tan\theta$ is undefined

34. $\tan\theta = -1$

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

36. $\cos\theta = \frac{-1}{2}$