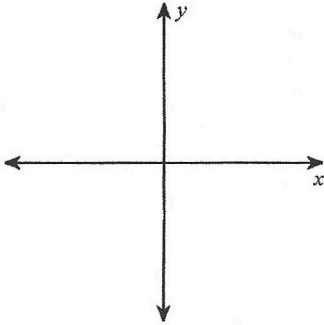


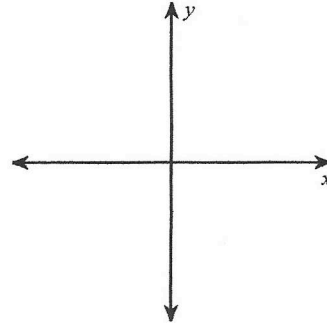
11.2 Homework

Draw an angle with the given measure in standard position.

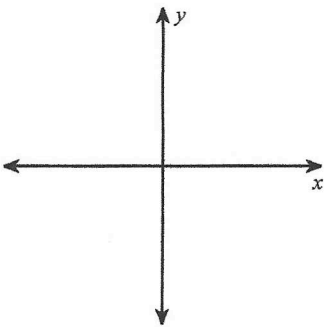
1) $\frac{5\pi}{3}$



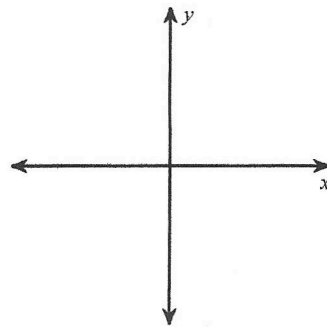
2) $\frac{\pi}{6}$



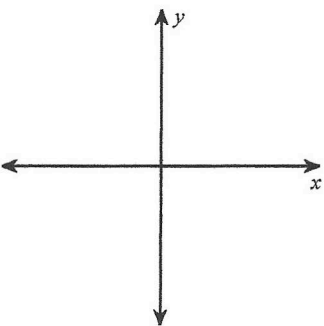
3) $\frac{5\pi}{6}$



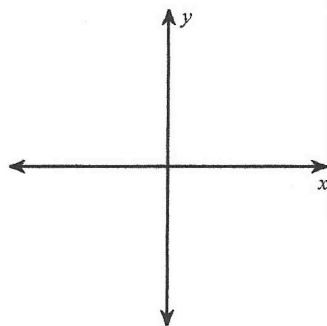
4) $\frac{7\pi}{4}$



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



6) $-\frac{7\pi}{6}$



Find a positive and a negative coterminal angle for each given angle.

7) $\frac{29\pi}{12}$

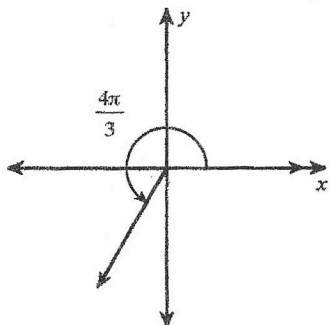
8) $\frac{2\pi}{3}$

9) $\frac{11\pi}{12}$

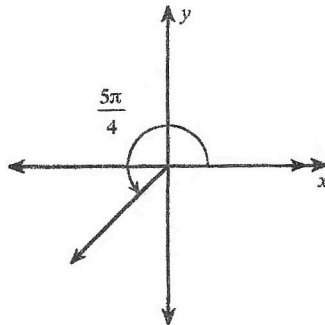
10) $\frac{\pi}{12}$

Find the reference angle.

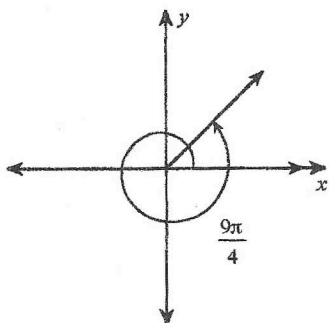
11)



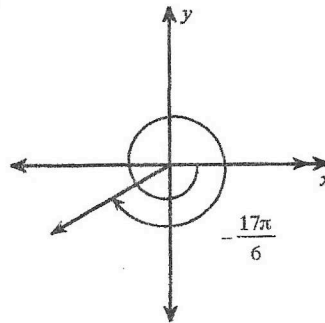
12)



13)



14)



Convert each radian measure into degrees.

15) $\frac{5\pi}{6}$

16) $\frac{7\pi}{4}$

17) $\frac{2\pi}{9}$

18) $\frac{5\pi}{4}$

Convert each degree measure into radians.

19) 120°

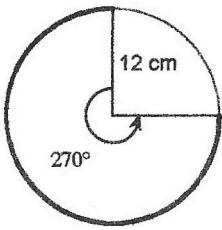
20) -135°

21) 160°

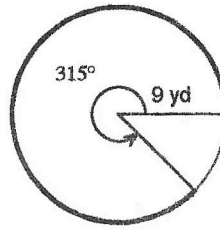
22) 340°

Find the length of each arc.

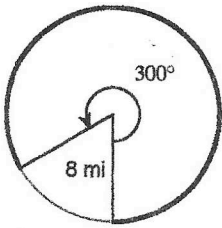
23)



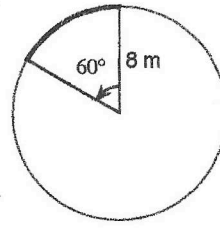
24)



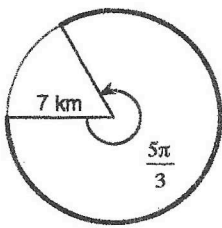
25)



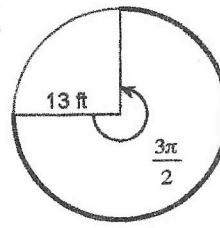
26)



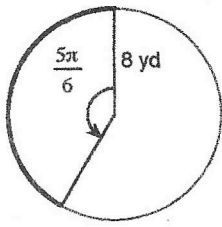
27)



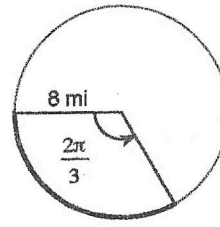
28)



29)

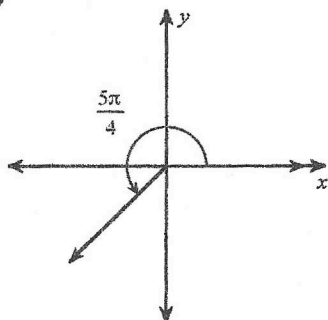


30)

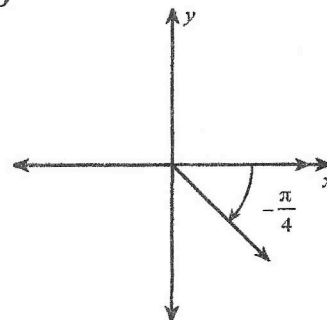


Find the exact value of each trigonometric function.

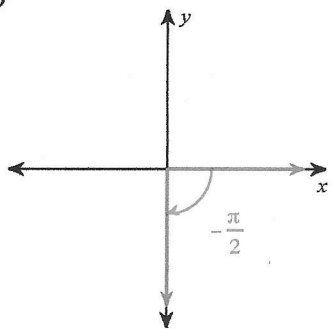
31) $\cot \theta$



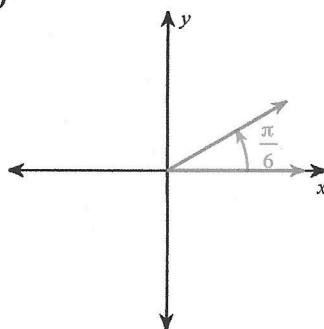
32) $\sin \theta$



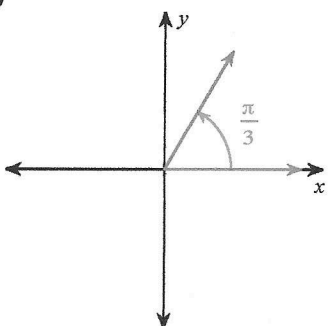
33) $\cos \theta$



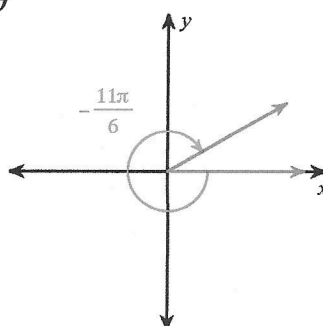
34) $\tan \theta$



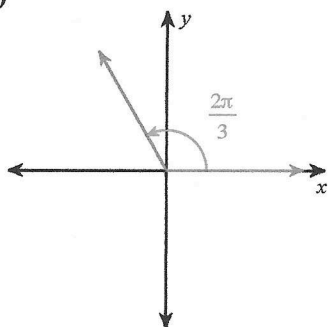
35) $\cos \theta$



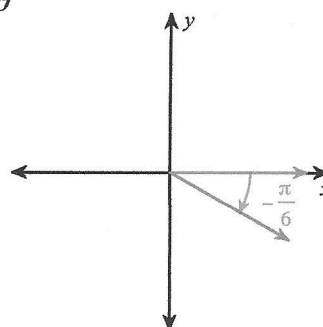
36) $\sin \theta$



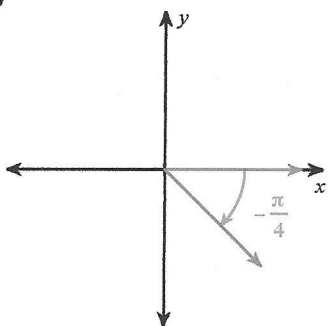
37) $\sin \theta$



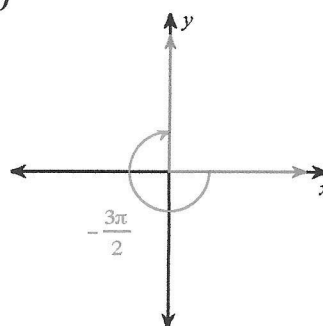
38) $\cos \theta$



39) $\tan \theta$



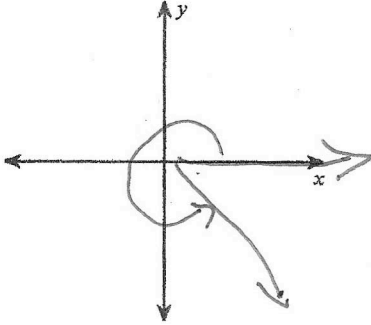
40) $\sin \theta$



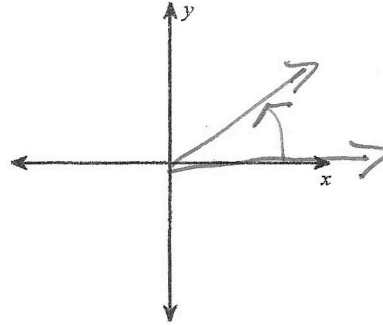
11.2 Homework

Draw an angle with the given measure in standard position.

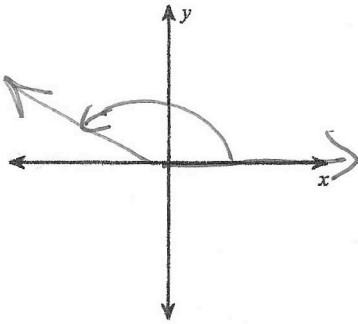
1) $\frac{5\pi}{3}$



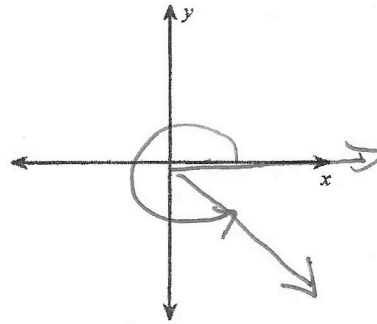
2) $\frac{\pi}{6}$



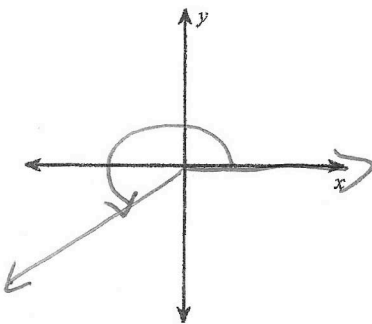
3) $\frac{5\pi}{6}$



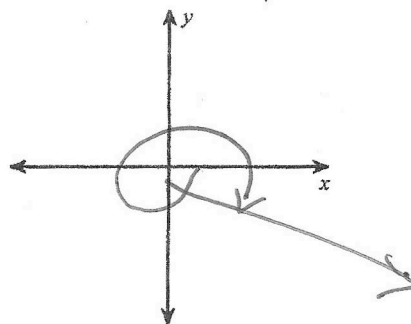
4) $\frac{7\pi}{4}$



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



6) $-\frac{7\pi}{6}$



Find a positive and a negative coterminal angle for each given angle.

7) $\frac{29\pi}{12}$

$$\frac{29\pi}{12} - \frac{24\pi}{12} = \frac{5\pi}{12}$$

$$\frac{5\pi}{12} - \frac{24\pi}{12} = -\frac{19\pi}{12}$$

8) $\frac{2\pi}{3}$

$$\frac{2\pi}{3} + \frac{6\pi}{3} = \frac{8\pi}{3}$$

$$\frac{2\pi}{3} - \frac{6\pi}{3} = -\frac{4\pi}{3}$$

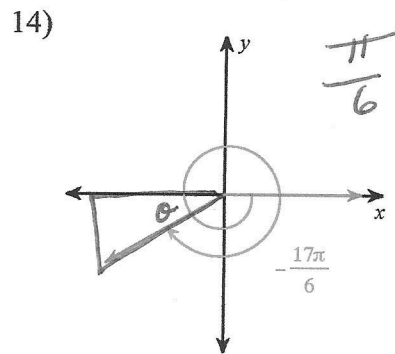
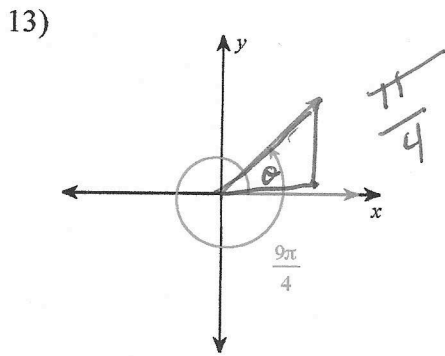
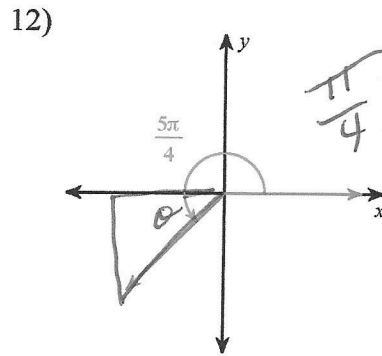
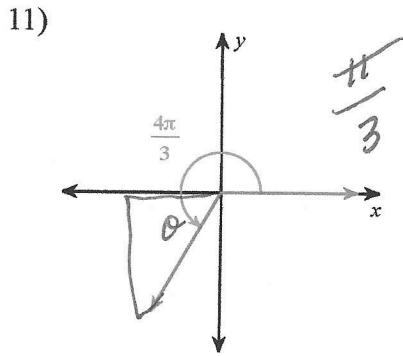
$$9) \frac{11\pi}{12} \quad \frac{11\pi}{12} + \frac{24\pi}{12} = \frac{35\pi}{12}$$

$$\frac{11\pi}{12} - \frac{24\pi}{12} = \frac{-13\pi}{12}$$

$$10) \frac{\pi}{12} \quad \frac{\pi}{12} + \frac{24\pi}{12} = \frac{25\pi}{12}$$

$$\frac{\pi}{12} - \frac{24\pi}{12} = \frac{-23\pi}{12}$$

Find the reference angle.



Convert each radian measure into degrees.

$$15) \frac{5\pi}{6} \cdot \frac{180^\circ}{\pi} = 150^\circ$$

$$16) \frac{7\pi}{4} \cdot \frac{180^\circ}{\pi} = 315^\circ$$

$$17) \frac{2\pi}{9} \cdot \frac{180^\circ}{\pi} = 40^\circ$$

$$18) \frac{5\pi}{4} \cdot \frac{180^\circ}{\pi} = 225^\circ$$

Convert each degree measure into radians.

$$19) 120^\circ \cdot \frac{\pi}{180^\circ} = \frac{2\pi}{3}$$

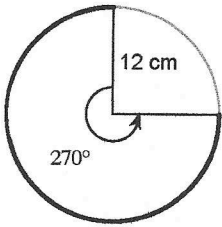
$$20) -135^\circ \cdot \frac{\pi}{180^\circ} = \frac{3\pi}{4}$$

$$21) 160^\circ \cdot \frac{\pi}{180^\circ} = \frac{8\pi}{9}$$

$$22) 340^\circ \cdot \frac{\pi}{180^\circ} = \frac{17\pi}{9}$$

Find the length of each arc.

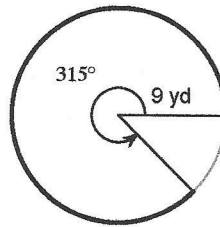
23)



$$270 \cdot \frac{\pi}{180} = \frac{3\pi}{2}$$

$$\frac{3\pi}{2} \cdot 12 = \boxed{18\pi \text{ cm}}$$

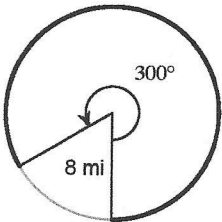
24)



$$315 \cdot \frac{\pi}{180} = \frac{7\pi}{4}$$

$$\frac{7\pi}{4} \cdot 9 = \boxed{\frac{63\pi}{4} \text{ yd}}$$

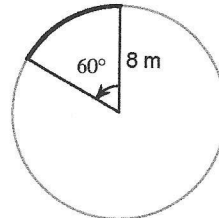
25)



$$300 \cdot \frac{\pi}{180} = \frac{5\pi}{3}$$

$$\frac{5\pi}{3} \cdot 8 = \boxed{\frac{40\pi}{3} \text{ mi}}$$

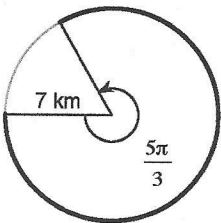
26)



$$60 \cdot \frac{\pi}{180} = \frac{\pi}{3}$$

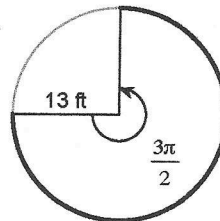
$$\frac{\pi}{3} \cdot 8 = \boxed{\frac{8\pi}{3} \text{ m}}$$

27)



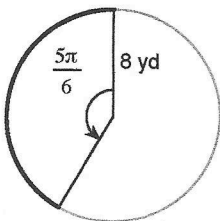
$$\frac{5\pi}{3} \cdot 7 = \boxed{\frac{35\pi}{3} \text{ km}}$$

28)



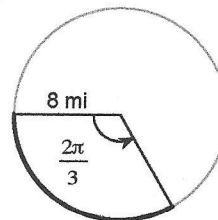
$$\frac{3\pi}{2} \cdot 13 \text{ ft} = \boxed{\frac{39\pi}{2} \text{ ft}}$$

29)



$$\frac{5\pi}{6} \cdot 8 = \boxed{\frac{20\pi}{3} \text{ yd}}$$

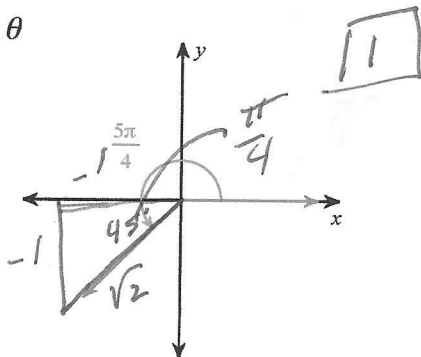
30)



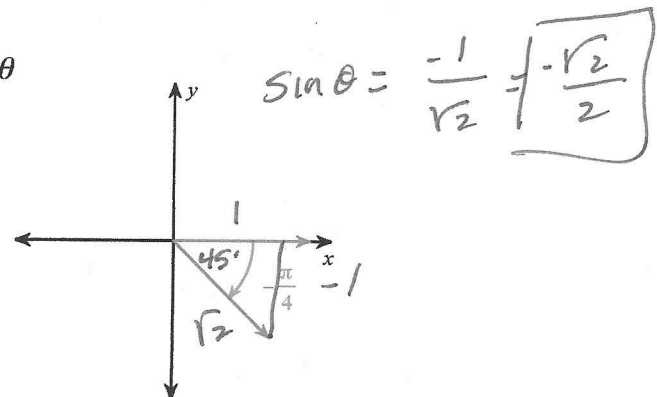
$$\frac{2\pi}{3} \cdot 8 = \boxed{\frac{16\pi}{3} \text{ mi}}$$

Find the exact value of each trigonometric function.

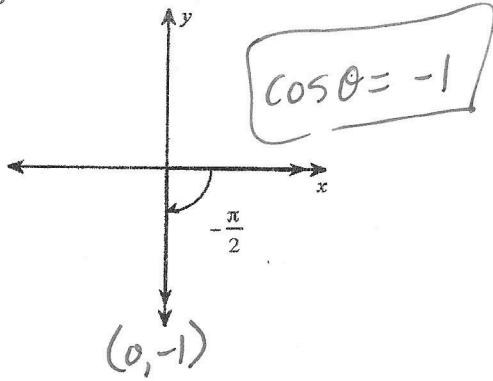
31) $\cot \theta$



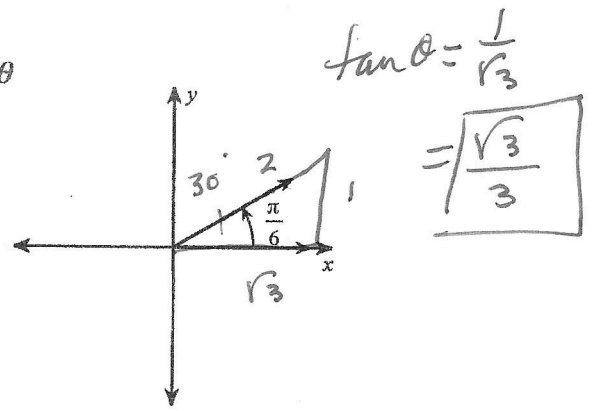
32) $\sin \theta$



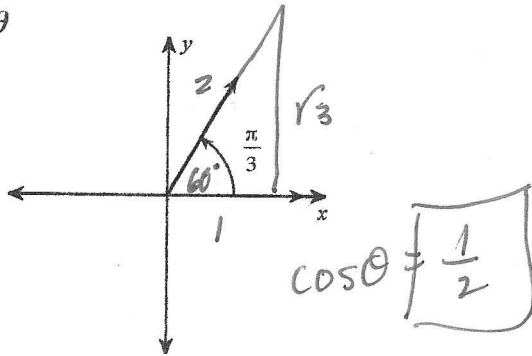
33) $\cos \theta$



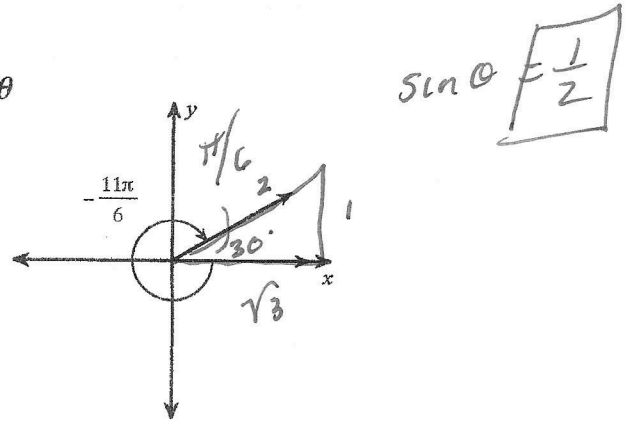
34) $\tan \theta$



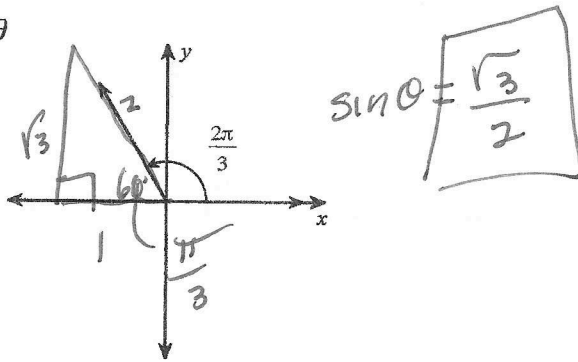
35) $\cos \theta$



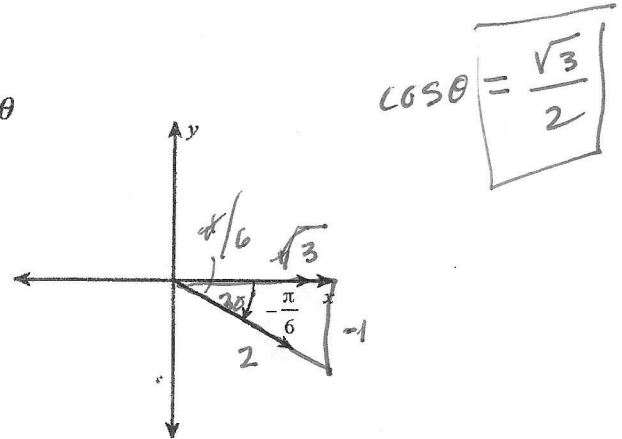
36) $\sin \theta$



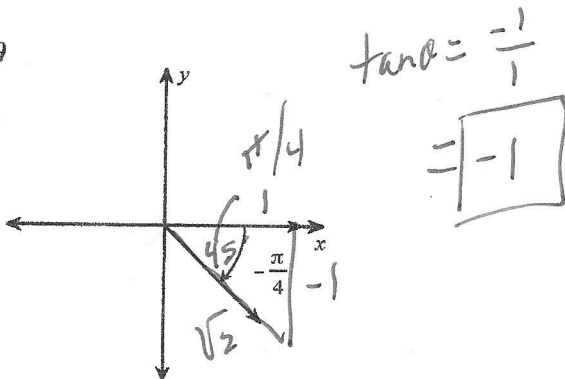
37) $\sin \theta$



38) $\cos \theta$



39) $\tan \theta$



40) $\sin \theta$

