

Unit 1 Quiz Review

Convert each degree measure into radians and each radian measure into degrees.

1) $-\frac{7\pi}{3}$

$-\frac{7\pi}{3} \cdot \frac{180}{\pi} = -420^\circ$

2) $\frac{50\pi}{9}$

$\frac{50\pi}{9} \cdot \frac{180}{\pi} = 1000^\circ$

3) 600°

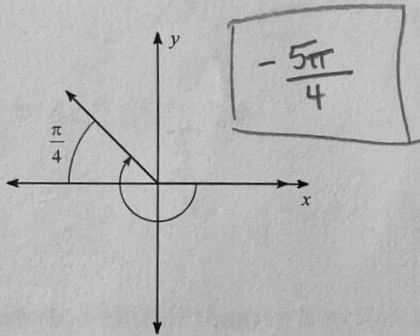
$\frac{600^\circ}{1} \cdot \frac{\pi}{180} = \frac{30\pi}{9}$

4) -230°

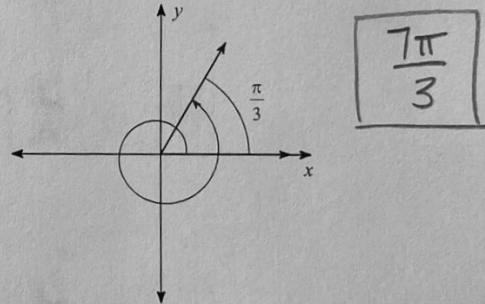
$-\frac{230^\circ}{1} \cdot \frac{\pi}{180} = -\frac{23\pi}{18}$

Find the measure of each angle.

5)

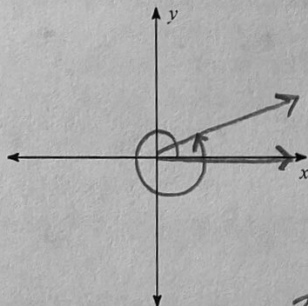


6)



Sketch an angle with the given measure in standard position. State one positive and one negative coterminal angle.

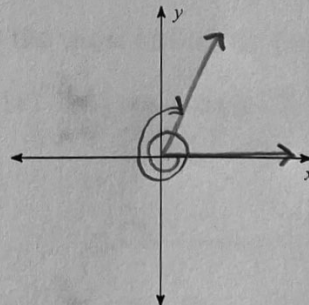
7) $\frac{13\pi}{6}$



$\frac{13\pi}{6} + 2\pi = \frac{25\pi}{6}$

$\frac{13\pi}{6} - 2\pi = \frac{\pi}{6}$

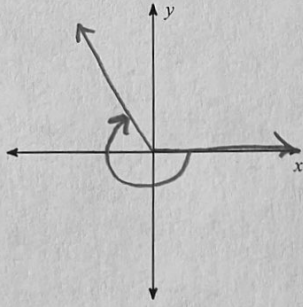
8) -645°



$-645^\circ + 360^\circ + 360^\circ = 75^\circ$

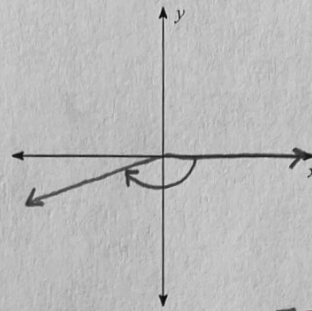
$-645 - 360 = -1005^\circ$

9) -240°



$-240^\circ + 360^\circ = 120^\circ$
 $-240 - 360^\circ = -600^\circ$

10) $-\frac{5\pi}{6}$



$-\frac{5\pi}{6} + 2\pi = \frac{7\pi}{6}$
 $-\frac{5\pi}{6} - 2\pi = -\frac{17\pi}{6}$

Determine the quadrant in which the terminal side of the angle lies.

11) $\frac{\pi}{3}$ **I**

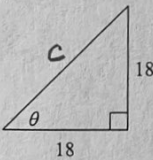
12) $-\frac{7\pi}{6}$ **II**

13) $-\frac{5\pi}{3}$ **I**

14) $\frac{7\pi}{4}$ **IV**

Find the value of the trig function indicated.

15) $\csc \theta$

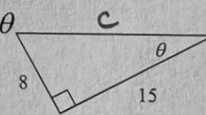


$2 \wedge 324$
 $2 \wedge 162$
 $2 \wedge 81$
 $9 \wedge 9$

$18^2 + 18^2 = c^2$
 $324 + 324 = c^2$
 $648 = c^2$
 $18\sqrt{2} = c$

$\csc \theta = \frac{18\sqrt{2}}{18} = \sqrt{2}$

16) $\sec \theta$

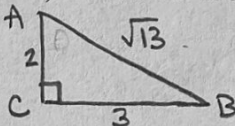


$8^2 + 15^2 = c^2$
 $64 + 225 = c^2$
 $289 = c^2$
 $17 = c$

$\sec \theta = \frac{17}{15}$

In each triangle ABC, angle C is a right angle. Find the value of the trig function indicated.

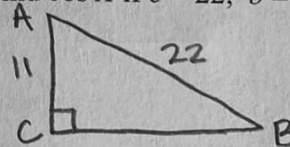
17) Find $\sec A$ if $c = \sqrt{13}$, $a = 3$



$\sec A = \frac{\sqrt{13}}{2}$

$3^2 + b^2 = (\sqrt{13})^2$
 $9 + b^2 = 13$
 $b^2 = 4$
 $b = 2$

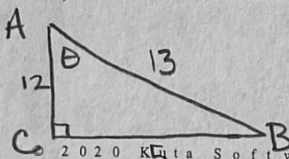
18) Find $\cos A$ if $c = 22$, $b = 11$



$\cos A = \frac{11}{22} = \frac{1}{2}$

Find the value of the trig function indicated.

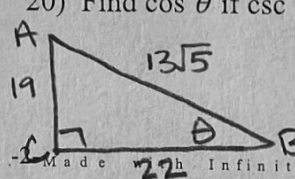
19) Find $\tan \theta$ if $\csc \theta = \frac{13}{5}$



$\tan \theta = \frac{5}{12}$

$5^2 + b^2 = 13^2$
 $25 + b^2 = 169$
 $b^2 = 144$
 $b = 12$

20) Find $\cos \theta$ if $\csc \theta = \frac{13\sqrt{5}}{19}$



$\cos \theta = \frac{19}{13\sqrt{5}}$
 $= \frac{19\sqrt{5}}{65}$

$19^2 + a^2 = (13\sqrt{5})^2$
 $361 + a^2 = 845$
 $a^2 = 484$
 $a = 22$