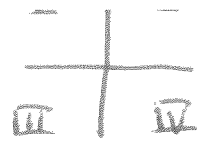


Name Mine



← Quadrants

Date _____

Practice 7.1: Angle Measures & Radians

1. Determine what quadrant the terminal ray is in.

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



b. $\frac{11\pi}{5}$

I

c. $-\frac{\pi}{12}$

IV

d. $-\frac{7\pi}{6}$

II

e. 291°

IV

f. -1000°



g. -2

← radian →

1.55 II



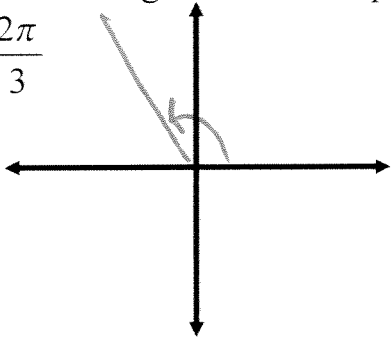
h. 6.1

III

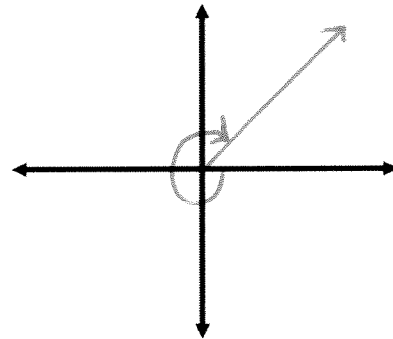


2. Sketch the angle in standard position.

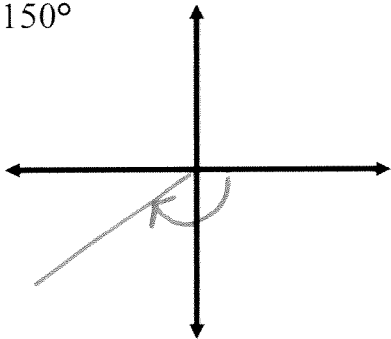
a. $\frac{2\pi}{3}$



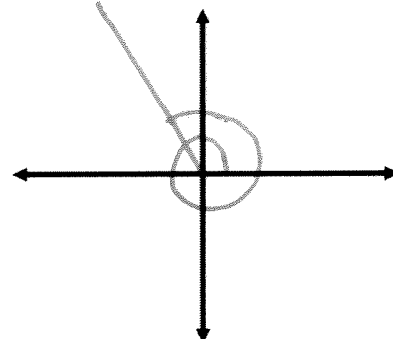
b. $-\frac{7\pi}{4}$



c. -150°

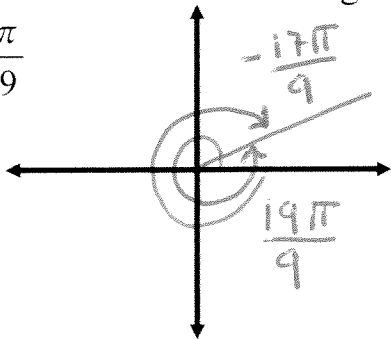


d. 480°

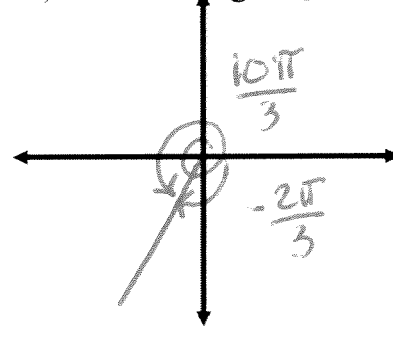


3. Determine 2 coterminal angles (1 positive & 1 negative) for each angle. Use Radians.

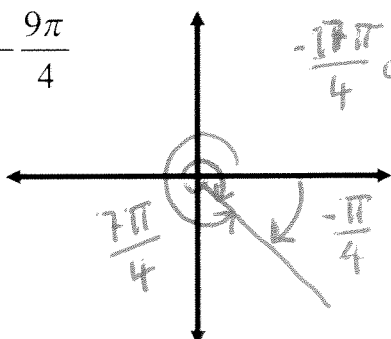
a. $\frac{\pi}{9}$



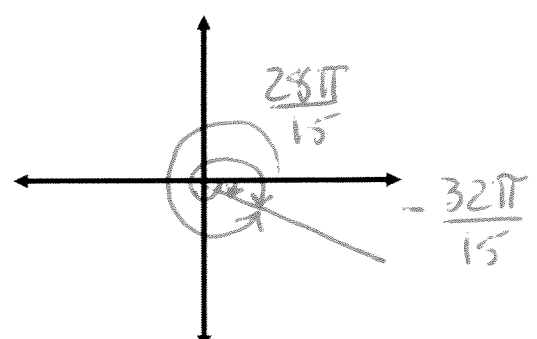
b. $\frac{4\pi}{3}$



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



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

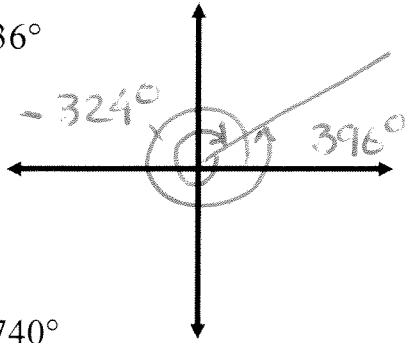


$2\pi = \frac{18\pi}{9}$

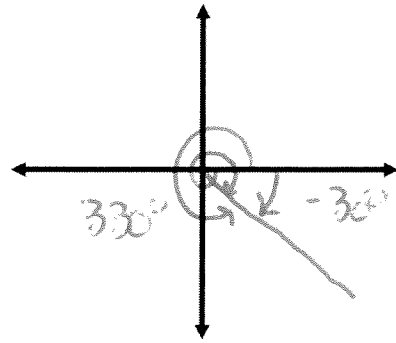
$-\frac{17\pi}{9}$ ok too

4. Determine 2 coterminal angles (1 positive & 1 negative) for each angle. Use Degrees.

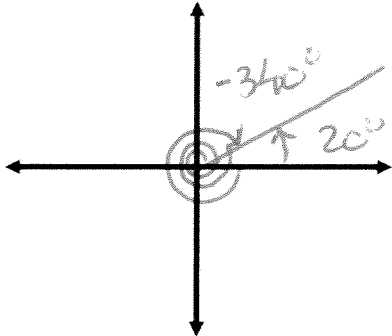
a. 36°



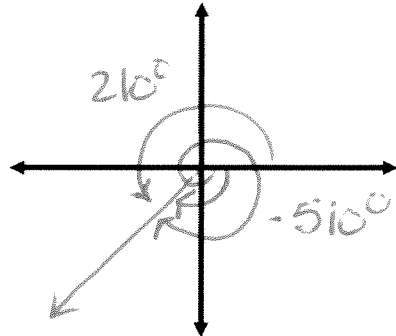
b. -390°



c. 740°



d. -150°



5. Find, if possible, the positive angle complement and supplement of each angle.

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

b. $\frac{\pi}{10}$ $C = \frac{4\pi}{10} = \frac{2\pi}{5}$

c. 162° $C = \emptyset$

d. 1 $C = 0.57$

Comp. $\frac{2\pi}{6} + \frac{\pi}{6} = \frac{3\pi}{6} = \frac{\pi}{2}$

Supp. $\frac{\pi}{3} + \frac{2\pi}{3} = \frac{3\pi}{3} = \pi$

$S = 18^\circ$

$S = 2.14$

6. Convert each angle to degrees without using a calculator.

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

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

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

d. $\frac{8\pi}{3}$

270°

210°

-66°

$8 \left(\frac{180}{3} \right)$
 $8(60) = 480^\circ$

7. Convert each angle to radians without using a calculator.

a. 120° $\frac{2\pi}{3}$

b. 315° $\frac{7\pi}{4}$

c. -330° $-\frac{11\pi}{6}$

d. 36° $\frac{36}{180} \times \pi = \frac{1}{5} \times \pi = \frac{\pi}{5}$

8. Convert each angle to degrees.

a. $\frac{\pi}{7} \times \frac{180}{\pi}$

b. $3.5 \times \frac{180}{\pi} = 3.14$

c. $-\frac{15\pi}{8}$

d. 6.5π

$\frac{180^\circ}{7} = 25.7^\circ$

200.5°

337.5°

1170°

9. Convert each angle to radians.

a. $112^\circ \times \frac{\pi}{180}$

b. -87.4°

c. 0.95°

d. $124^\circ 12' = 124.2^\circ$

$= 0.62\pi$

$= -0.485\pi$

$= 0.005\pi$

$= 0.69\pi$

or: 1.95

$= -1.525$

$= 0.0165\pi$

$= 2.1$