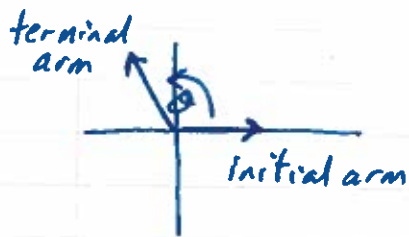
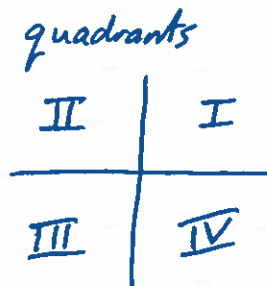


2.1 Angles in Standard Position

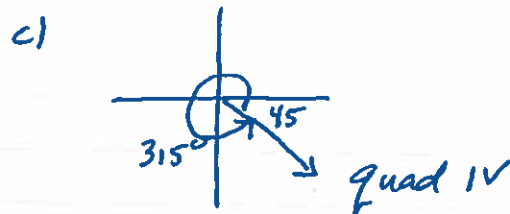
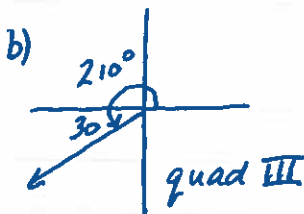
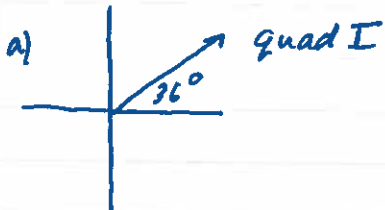


+ ↺ - ↻

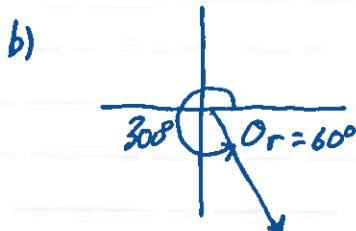
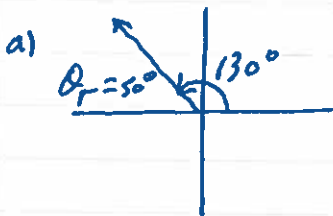


reference angle: the acute angle between the terminal arm and the x-axis

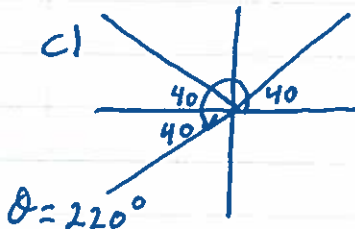
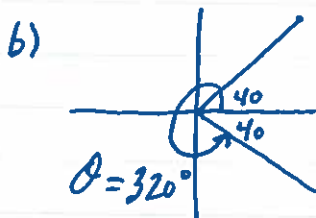
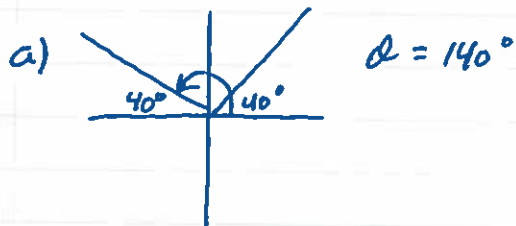
example 1 pg 79



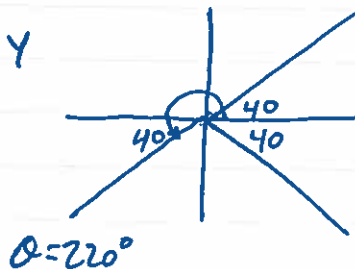
example 2 pg 80



example 3 pg 81



* d) X then Y



* do 1-7 in class (pg 83)

use triangles on pg 82 to do #8 pg 83

HW 9, 10, 11, 16, 17, 14

1 a) no, not rotating from the origin

b) yes

c) no, initial arm is not x-axis

d) yes

2 a) 150° F

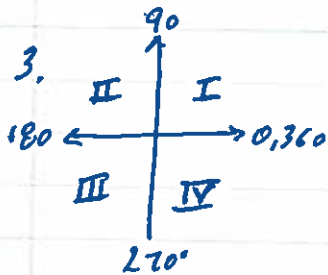
d) 320° D

b) 180° C

e) 215° B

c) 45° A

f) 270° E



a) 48° I

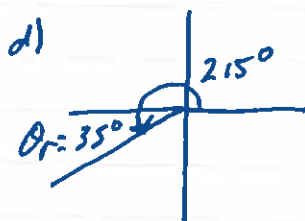
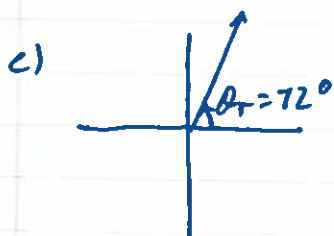
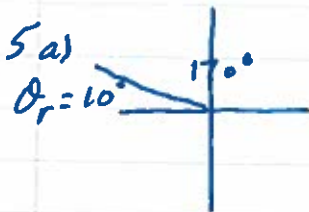
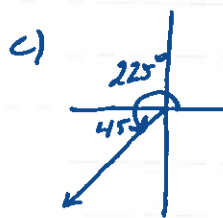
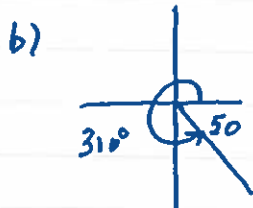
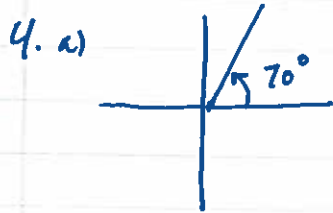
d) 75° I

b) 300° IV

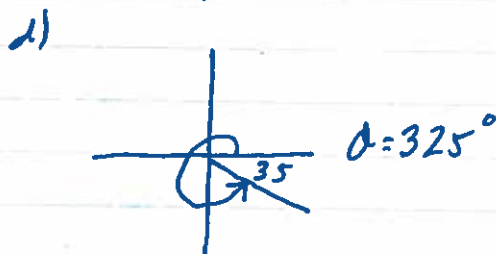
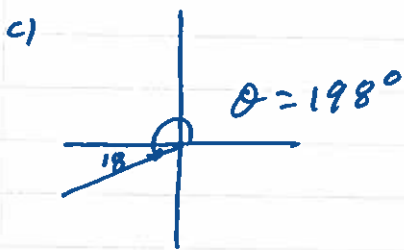
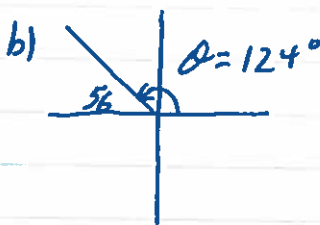
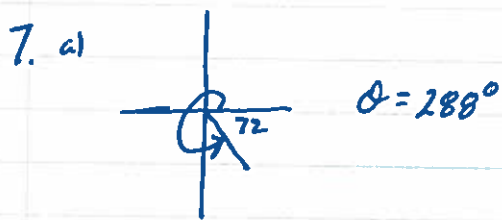
e) 220° III

c) 185° III

f) 160° II

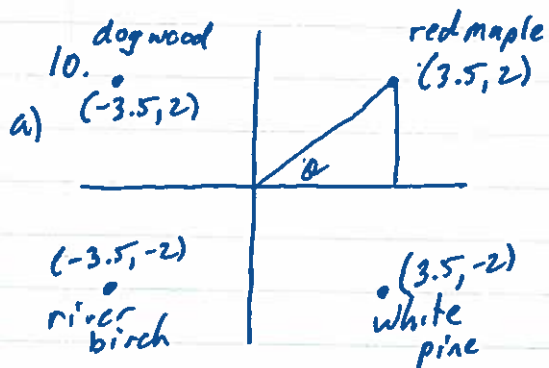
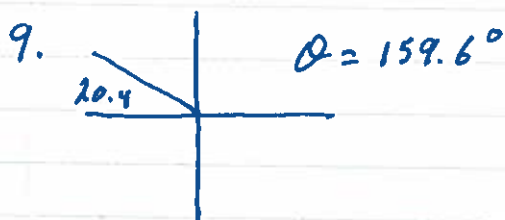


- 6 a) 45° : $135^\circ, 225^\circ, 315^\circ$
 b) 60° : $120^\circ, 240^\circ, 300^\circ$
 c) 30° : $150^\circ, 210^\circ, 330^\circ$
 d) 75° : $105^\circ, 255^\circ, 285^\circ$
 ↑ ↑ ↑ ↑
 θ $180-\theta$ $180+\theta$ $360-\theta$



8.

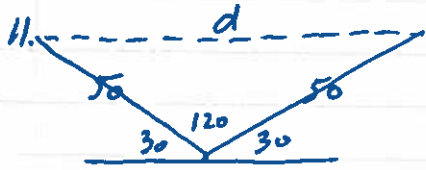
θ	$\sin \theta$	$\cos \theta$	$\tan \theta$
30	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$
45	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	1
60	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\sqrt{3}$



b) $\tan \theta = \frac{2}{3.5}$

- $\theta = 29.7^\circ$ (30) red maple
 150° dogwood
 210° river birch
 330° white pine

c) grid 14
 $\therefore 40m$



cosine law

$$d^2 = 50^2 + 50^2 - 2(50)(50) \cos 120$$

$$d^2 = 7500$$

$$d = \sqrt{7500}$$

$$d = \sqrt{100} \sqrt{25} \sqrt{3}$$

$$d = 10 \cdot 5 \sqrt{3}$$

$$d = 50\sqrt{3} \text{ cm}$$

16. a) $\frac{12}{20} = \frac{x}{360}$

$$20x = 4320$$

$$x = 216^\circ$$

b) $\frac{8}{20} = \frac{x}{360}$

$$20x = 2880$$

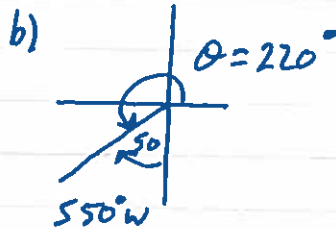
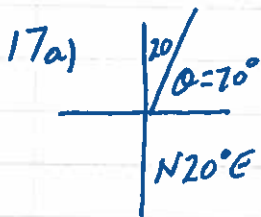
$$x = 144^\circ$$

$$\uparrow 180 + 36^\circ$$

$$\therefore 180 - 36^\circ = 144^\circ$$

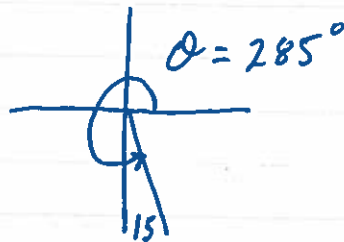
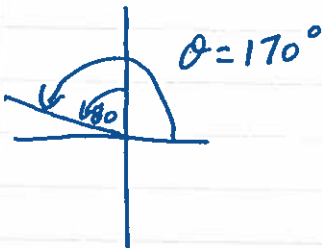
c) 36° less than $360^\circ \therefore 324^\circ$

2 days less than 20 $\therefore 18$ days



c) $N80^\circ W$

d) $S15^\circ E$



14

