Exam I
Practice Problems

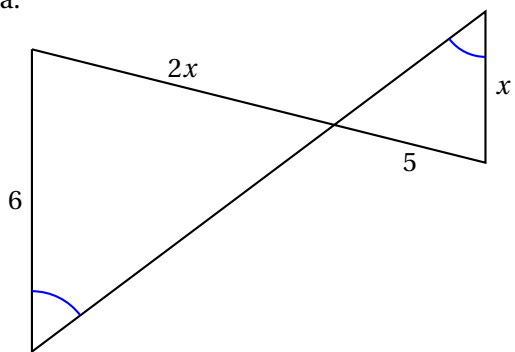1. Convert $84.124°$ into Degrees Minutes Seconds.
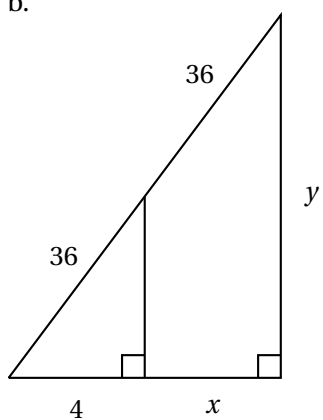
2. Calculate the $38°27' + 13°52'$.

3. Find the complimentary angle to $27°34'$

4. Solve for the unknown variable for each pair of *similar* triangles.

a.
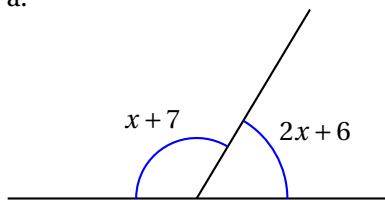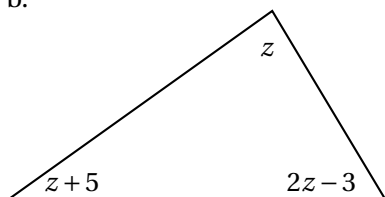

b.

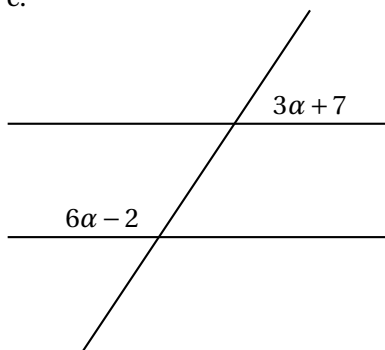5. Solve for the unknown variables in the following figures.

a.

$x + 7$

$2x + 6$
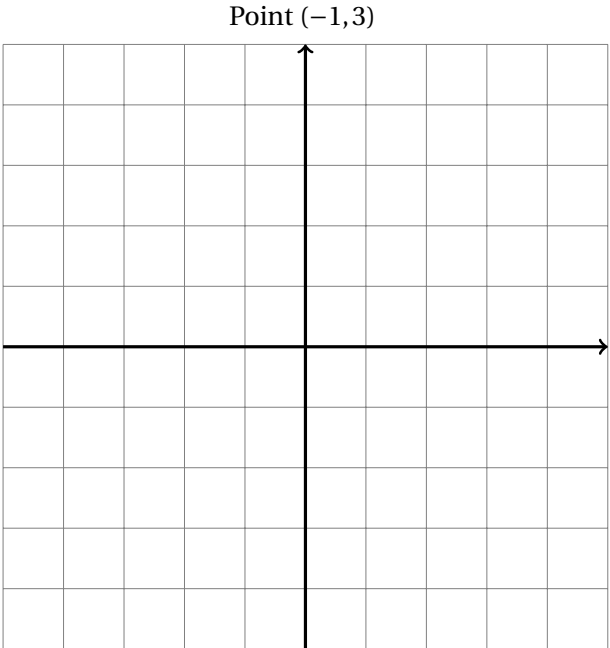
b.
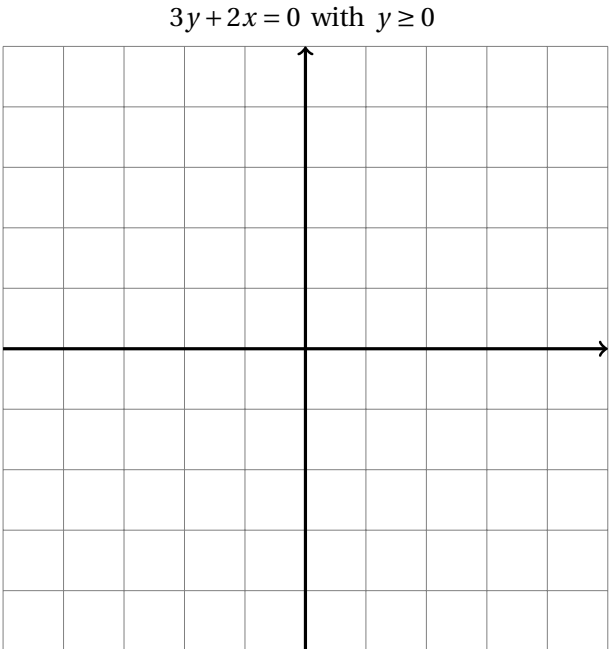
z

$z + 5$

$2z - 3$

c.

$3\alpha + 7$

$6\alpha - 2$

6. Sketch the angle θ CCW from the positive x-axis (this is called the standard position for θ in the book) given from the point. Then fill in the values for the six trigonometric functions.

Point $(-1,3)$

Trig functions	
$\sin\theta$	
$\cos\theta$	
$\tan\theta$	
$\csc\theta$	
$\sec\theta$	
$\cot\theta$	

7. Sketch the line described below and fill in the values for the six trigonometric functions.

$3y + 2x = 0$ with $y \geq 0$

Trig functions	
$\sin\theta$	
$\cos\theta$	
$\tan\theta$	
$\csc\theta$	
$\sec\theta$	
$\cot\theta$	

8. Fill in the table of all the trigonometric functions given a trigonometric value and a quadrant.

$$\cos\theta = \frac{-1}{5} \text{ with } \theta \text{ in quadrant II}$$

$\sin\theta$	$\cos\theta$	$\tan\theta$	$\csc\theta$	$\sec\theta$	$\cot\theta$
	$\dfrac{-1}{5}$				

$$\tan\theta = \frac{2}{3} \text{ with } \theta \text{ in quadrant III}$$

$\sin\theta$	$\cos\theta$	$\tan\theta$	$\csc\theta$	$\sec\theta$	$\cot\theta$
		$\dfrac{2}{3}$			