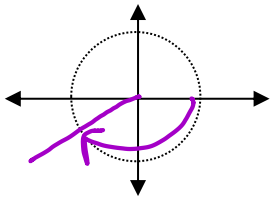
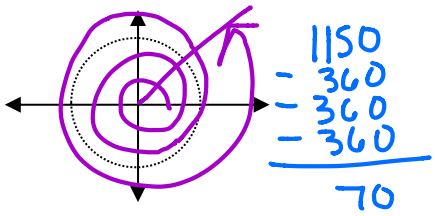
1.4 Worksheet: Angle Measure Name: _____

Sketch a graph of each angle. Determine the quadrant of the terminal side of the angle in standard position.

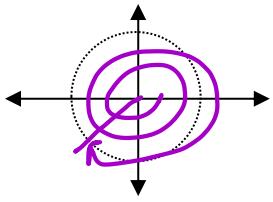
1. -160°



2. 1150°



3. -827° +360 +360 -107



Determine the measure of an angle θ coterminal with the bold angle that satisfies the specified condition.

4. **48°**; 360° ≤ θ ≤ 720°

408°

5. **110°**; -360° ≤ θ ≤ 0°

-250°

6. **-250°**; 360° ≤ θ ≤ 720°

+360 +360 470°

Determine two different coterminal angles, one with positive measures, and one with negative measures for each angle.

7. 55°

415°
-305

8. -150°

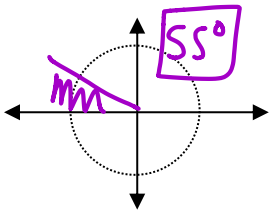
210
-510

9. 410°

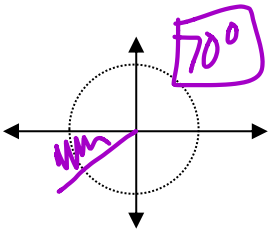
50° or 770°
-310°

Find the reference angle for each of the following

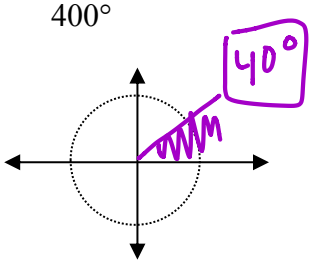
10. 125° 180 - 125



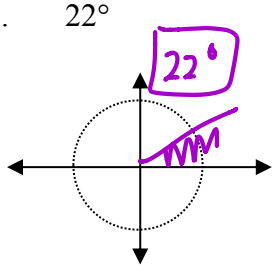
11. -110°



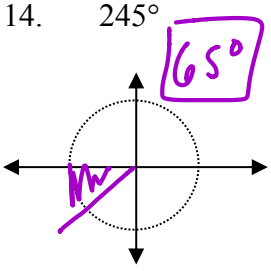
12. 400°



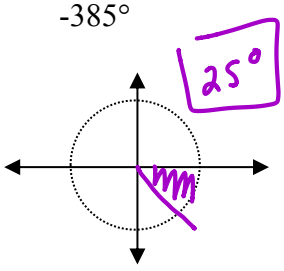
13. 22°



14. 245°



15. -385°



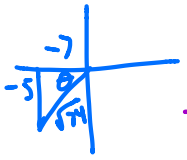
1.4 Worksheet: Angle Measure Name: _____

Find the exact values of the six trig functions of an angle θ whose terminal side passes through the given point.

16. $(3,-4)$

$\sin\theta = -4/5$
$\cos\theta = 3/5$
$\tan\theta = -4/3$
$\csc\theta = -5/4$
$\sec\theta = 5/3$
$\cot\theta = -3/4$

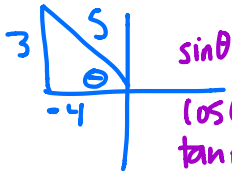
17. $(-7,-5)$



$\sin\theta = -5/\sqrt{74}$
$\cos\theta = -7/\sqrt{74}$
$\tan\theta = 5/7$
$\csc\theta = \sqrt{74}/5$
$\sec\theta = -\sqrt{74}/7$
$\cot\theta = 7/5$

Find the exact value of the other five trig functions of θ if θ terminates in the given quadrant and has the given function value.

18. QII, $\sec\theta = -\frac{5}{4}$



$\sin\theta = 3/5$
$\cos\theta = -4/5$
$\tan\theta = -3/4$
$\csc\theta = 5/3$
$\sec\theta = -5/4$
$\cot\theta = -4/3$

19. QIII, $\tan\theta = \frac{1}{3}$

$\sin\theta = -1/\sqrt{10}$
$\cos\theta = -3/\sqrt{10}$
$\tan\theta = 1/3$
$\csc\theta = -\sqrt{10}$
$\sec\theta = -\sqrt{10}/3$
$\cot\theta = 3$