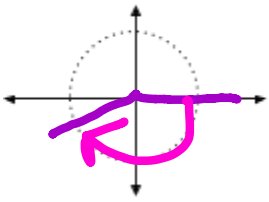
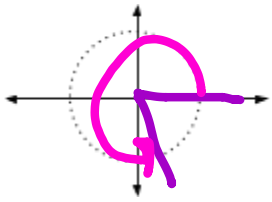
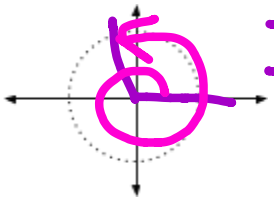
Pre AP Pre-Calculus
Worksheet: Angle Measure

Name: _____
Date: _____Period: _____

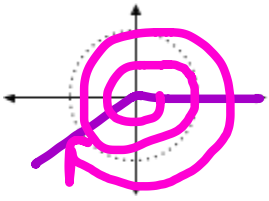
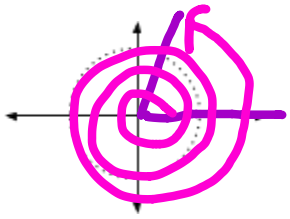
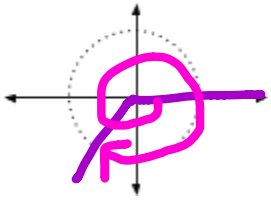
Sketch a graph of each angle. Determine the quadrant of the terminal side of the angle in standard position.

1. -160°
2. 280°
3. 452°

452
-360
92

4. -827°
5. 1150°
6. -455°

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

7. 48°; 360° ≤ θ ≤ 720° 408°
8. 110°; -360° ≤ θ ≤ 0° -250°

9. -15°; 180° ≤ θ ≤ 540° 345°
10. -250°; 360° ≤ θ ≤ 720° 470°

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

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11. 55° -305° 415°

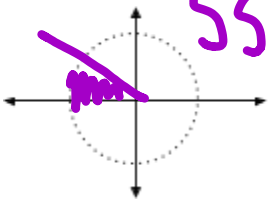
12. -150° 210° -510

13. -22°

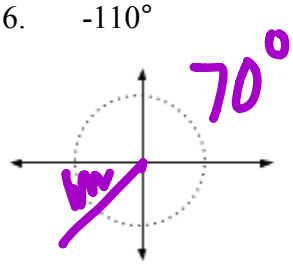
14. 410° 50° or 770° -310°

Find the reference angle for each of the following

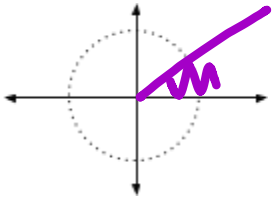
12. 125°



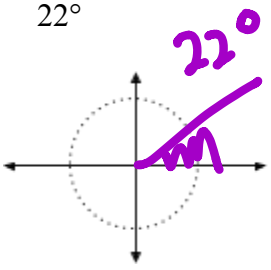
16. -110°



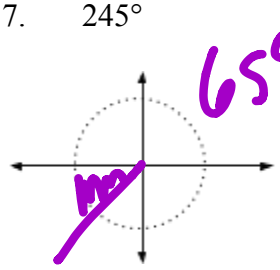
17. 400°



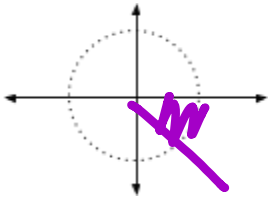
18. 22°



17. 245°

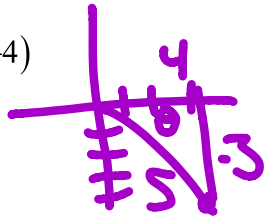


20. -385°



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

21. $(3,-4)$



$\sin\theta = -3/5$ $\cos\theta = \frac{4}{5}$ $\tan\theta = \frac{-3}{4}$

$\csc\theta = 5/-3$ $\sec\theta = \frac{5}{4}$ $\cot\theta = \frac{-4}{3}$

22. $(-7,-5)$

$\sin\theta = \frac{-5}{\sqrt{74}}$ $\csc\theta = -\frac{\sqrt{74}}{5}$

$\cos\theta = \frac{-7}{\sqrt{74}}$ $\sec\theta = -\frac{\sqrt{74}}{7}$

$\tan\theta = 5/7$ $\cot\theta = \frac{7}{5}$

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.

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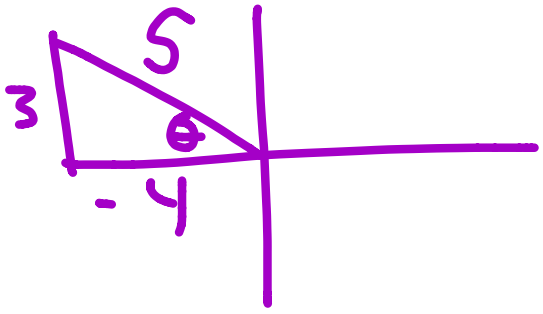
23. QII, $\sec\theta = -\frac{5}{4}$



$\sin\theta = \frac{3}{5}$ $\csc\theta = \frac{5}{3}$

$\cos\theta = -\frac{4}{5}$

$\tan\theta = -\frac{3}{4}$ $\cot\theta = -\frac{4}{3}$

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

$\sin\theta = -\frac{1}{\sqrt{10}}$

$\cos\theta = -\frac{3}{\sqrt{10}}$

$\csc\theta = -\sqrt{10}$

$\sec\theta = -\frac{\sqrt{10}}{3}$

$\cot\theta = 3$