

Math 3 Unit 8 Worksheet 2

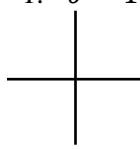
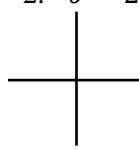
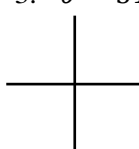
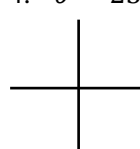
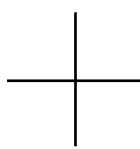
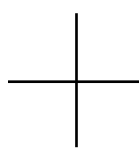
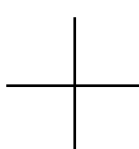
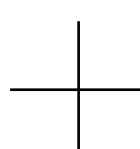
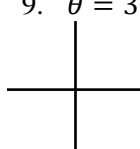
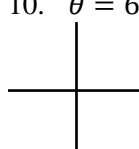
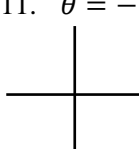
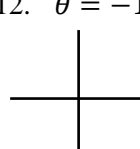
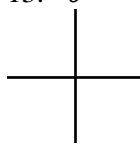
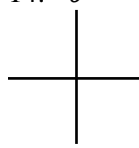
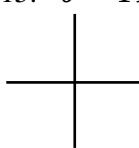
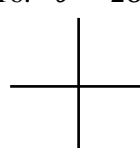
Angles in Standard Position & Intro to Solving for an Angle

** Scientific calculator not allowed. **

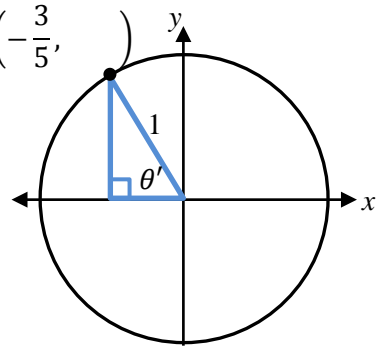
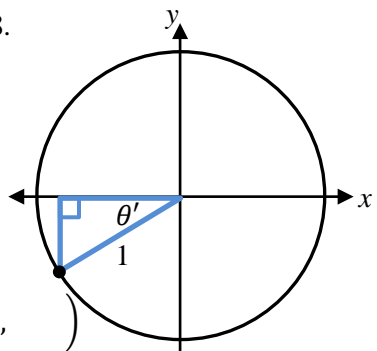
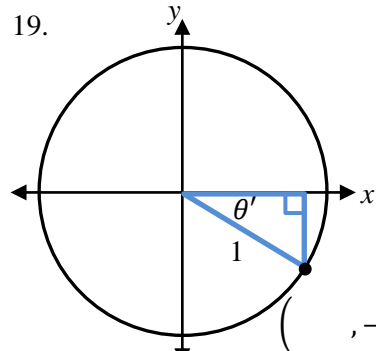
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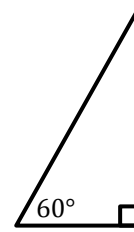
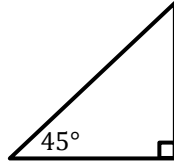
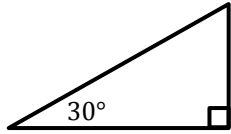
[1-16]: a) sketch each of the following angles in standard position, b) identify the quadrant in which the terminating ray resides, and c) find the reference angle, θ' , for each of the original angles.

<p>1. $\theta = 160^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>2. $\theta = 200^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>3. $\theta = 310^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>4. $\theta = 230^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>
<p>5. $\theta = 100^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>6. $\theta = 440^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>7. $\theta = 500^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>8. $\theta = 705^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>
<p>9. $\theta = 385^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>10. $\theta = 610^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>11. $\theta = -70^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>12. $\theta = -140^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>
<p>13. $\theta = -310^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>14. $\theta = -195^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>15. $\theta = 195^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>	<p>16. $\theta = 280^\circ$</p>  <p>b) Quadrant _____</p> <p>c) $Ref \angle \theta' =$ _____</p>

[17-19]: a) Find the missing coordinate for the point on the unit circle. b) Next find the simplified sine, cosine, and tangent ratios for the angle, θ , by using its reference angle, θ' .

<p>17. $(-\frac{3}{5}, \quad)$</p>  <p>b) $\sin \theta =$ _____</p> <p>$\cos \theta =$ _____</p> <p>$\tan \theta =$ _____</p>	<p>18. $(-\frac{12}{13}, \quad)$</p>  <p>b) $\sin \theta =$ _____</p> <p>$\cos \theta =$ _____</p> <p>$\tan \theta =$ _____</p>	<p>19. $(\quad, -\frac{8}{17})$</p>  <p>b) $\sin \theta =$ _____</p> <p>$\cos \theta =$ _____</p> <p>$\tan \theta =$ _____</p>
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[20-27]: Fill-in the missing sides for the special right triangles found below, then find the acute angle, θ , that satisfies the following equations.



20. $\sin \theta = \frac{\sqrt{3}}{2}$

21. $\cos \theta = \frac{\sqrt{3}}{2}$

22. $\tan \theta = \sqrt{3}$

23. $\sin \theta = \frac{\sqrt{2}}{2}$

24. $\tan \theta = 1$

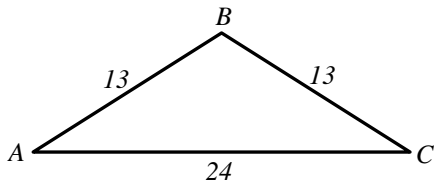
25. $\cos \theta = \frac{1}{2}$

26. $\cos \theta = \frac{\sqrt{2}}{2}$

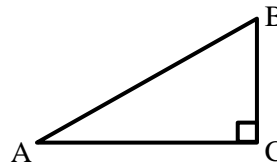
27. $\tan \theta = \frac{\sqrt{3}}{3}$

[28-29]: Review

28. Find $\sin A$, $\cos A$, & $\tan A$, given isosceles $\triangle ABC$.



29. If $\tan B = \frac{24}{7}$, then find $\sin A$, $\cos A$, & $\tan A$.



b) $\sin A = \underline{\hspace{2cm}}$

$\cos A = \underline{\hspace{2cm}}$

$\tan A = \underline{\hspace{2cm}}$

b) $\sin A = \underline{\hspace{2cm}}$

$\cos A = \underline{\hspace{2cm}}$

$\tan A = \underline{\hspace{2cm}}$