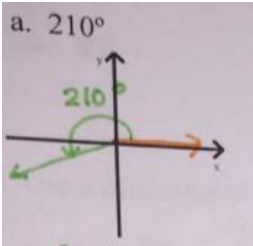


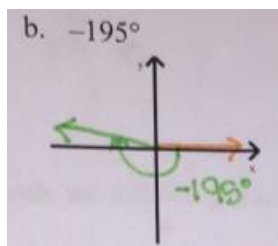
<p>(+1)</p> <p>1. False (Pyth Thm can only be used for right triangles.)</p> <p>2. True</p>	<p>Multiple Choice (+1)</p> <p>3. B</p> <p>4. A</p> <p>5. D</p> <p>6. C</p> <p>7. C</p> <p>8. A</p> <p>9. B</p> <p>10. C</p>
<p>Free Response (+6 points, 1 for each sin, cos, tan, csc, sec, and cot)</p> <p>11.a) $\sin \theta = \frac{2}{\sqrt{5}}$ $\csc \theta = \frac{\sqrt{5}}{2}$</p> <p>$\cos \theta = \frac{1}{\sqrt{5}}$ $\sec \theta = \sqrt{5}$</p> <p>$\tan \theta = 2$ $\cot \theta = \frac{1}{2}$</p> <p>11.b) $\sin \theta = \frac{\sqrt{55}}{8}$ $\csc \theta = \frac{8}{\sqrt{55}}$</p> <p>$\cos \theta = \frac{3}{8}$ $\sec \theta = \frac{8}{3}$</p> <p>$\tan \theta = \frac{\sqrt{55}}{3}$ $\cot \theta = \frac{3}{\sqrt{55}}$</p>	<p>(+2 points, 1 for each value find)</p> <p>12.a) $\sin \theta = \frac{4}{\sqrt{41}}$</p> <p>$\cos \theta = \frac{5}{\sqrt{41}}$</p> <p>12.b) $\sin \theta = \frac{12}{13}$</p> <p>$\tan \theta = \frac{12}{5}$</p>
<p>(+1)</p> <p>13.a) $\frac{\pi}{12}$</p> <p>13.b) $\frac{4\pi}{3}$</p> <p>13.c) 150°</p> <p>13.d) 54°</p>	

(+3 points, 1 for sketch, 1 for pos, 1 for neg)

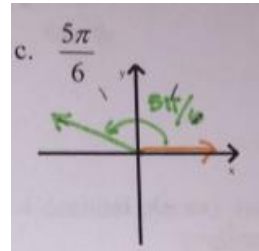
14.a) pos: 570°
neg: -150°



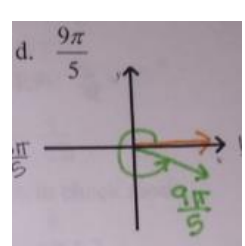
14.b) pos: 165°
neg: -555°



14.c) pos: $\frac{17\pi}{6}$
neg: $-\frac{7\pi}{6}$

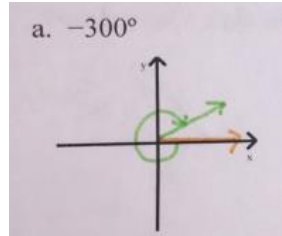


14.d) pos: $\frac{19\pi}{5}$
neg: $-\frac{\pi}{5}$

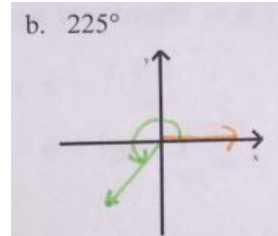


(+2 points, 1 for sketch, 1 for RA)

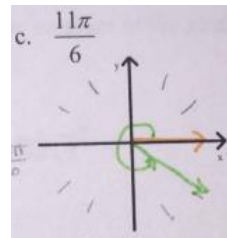
15.a) RA: 60°



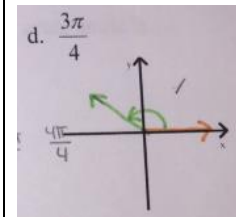
15.b) RA: 45°



15.c) RA: $\frac{\pi}{6}$



15.d) RA: $\frac{\pi}{4}$



(+3 points, 1 for each sin, cos, tan)

16.a) $\sin \theta = \frac{-11}{\sqrt{137}}$
 $\cos \theta = \frac{4}{\sqrt{137}}$
 $\tan \theta = \frac{-11}{4}$

16.b) $\sin \theta = \frac{2}{\sqrt{5}}$
 $\cos \theta = \frac{-1}{\sqrt{5}}$
 $\tan \theta = -2$

16.c) $\sin \theta = \frac{-4}{\sqrt{19}}$
 $\cos \theta = \frac{-\sqrt{3}}{\sqrt{19}}$
 $\tan \theta = \frac{4}{\sqrt{3}}$

(+1)

17.a) 0

17.b) $-\frac{\sqrt{3}}{2}$

17.c) $-\sqrt{3}$

17.d) $\frac{\sqrt{3}}{2}$

17.e) $\frac{1}{2}$

17.f) -1

17.g) 1

17.h) $-\frac{\sqrt{2}}{2}$

(+1)

18.a) -0.7813

18.b) -1.7434

18.c) -0.8011

18.d) 0.2776

(+1)

19. 32.7°

20. a) $b = 25.7$
 $c = 28.4$

20. b) $b = 25.3$
 $c = 28.9$

21. 65.1 ft