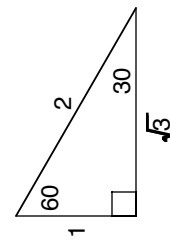


Test 4

- 1) A: $90^\circ - 72^\circ = 47^\circ$
- 2) A: $\tan = \frac{\text{opp}}{\text{adj}}; \tan 50^\circ = \frac{A}{8}$
- 3) C: A and B are not correct equalities; D would be correct, but we are looking for H, not A
- 4) D: $\tan 50^\circ = \frac{A}{8}$
 $A = 8(1.1918) = 9.5344$ (rounds to 9.5)
- 5) C: $\cos 50^\circ = \frac{8}{H}$
 $H(.6428) = 8$
 $H = \frac{8}{.6428} = 12.4$
- 6) B: $90^\circ - 72^\circ = 18^\circ$
- 7) A: You need the value of H to determine A
- 8) C: $\sin 72^\circ$ should be $\frac{5}{H}$
- 9) B: $\tan 72^\circ = \frac{A}{5}; 5(3.0771) = 15.4$

- 10) D: $\sin 18^\circ = \frac{5}{H}$
 $.3090 = \frac{5}{H}$
 $H = \frac{5}{.3090} = 16.2$



- 11) D
- 12) A
- 13) B: $\tan 60^\circ = \frac{\sqrt{3}}{1} = \sqrt{3}$

- 14) B: because the opposite and adjacent sides are the same length

- 15) A

Test 5

- 1) C: $\cos 38^\circ = .7880$
- 2) B: $\tan 79^\circ = 5.1446$
- 3) B: $\cos \theta = .9659; \theta = 15^\circ$
- 4) A: $\arctan .8391 = 40^\circ$
- 5) D: $14 \text{ sec} \times \frac{1 \text{ min}}{60 \text{ sec}} = .23$
 $29.23 \text{ min} = \frac{1 \text{ deg}}{60 \text{ min}} = \frac{29.23}{60} = .49$
- 6) C: $.36 \times 60 = 21.6$; 21 minutes
 $.6 \times 60 = 36$; 36 seconds
 answer: 28° 21' 36"
- 7) D: $\tan \theta = \frac{13}{14} = .92857$
 $\arctan(.92857) = 42.9^\circ$
- 8) A: $90^\circ - 42.9^\circ = 47.1^\circ$
- 9) C: $13^2 + 14^2 = H^2$
 $169 + 196 = 365$
 $H = \sqrt{365} = 19.1$
- 10) A: $\arctan(.92857) = 42.8788$
 $= 42.88$ (rounded);
 $.88 \times 60 \approx 53$

- 11) D
- 12) C
- 13) B
- 14) B

- 15) D: The short side is always $1/2 \sqrt{3}$ times the hypotenuse

Test 6

- 1) D: $\tan 42^\circ = \frac{X}{926}$
- 2) A: $926 \times \tan 42^\circ = 926(.9004) = 833.8 \text{ m}$
- 3) B: $\tan \theta = \frac{883.8}{926} = .9536$
 $\theta = 43.6^\circ$
 $.6^\circ \times 60 = 36'$; so $43^\circ 36'$
- 4) B: $926^2 + 883.8^2 =$
 $857,476 + 781,102 = 1,638,578$
 $\sqrt{1,638,578} = 1,280 \text{ m}$
- 5) C: $\tan 54^\circ = \frac{Y}{80}$
 $Y = 80 \tan 54^\circ$
- 6) A: $\tan 51^\circ = \frac{B}{80}$; B = 98.8 m
- 7) D: $Y = 80 \tan 54^\circ$
 $Y = 110.1$ (complete distance);
 $110.1 - 98.8 = 11.3 \text{ m}$
- 8) B: $80^2 + 98.8^2 = 6,400 + 9,761 = 16,161$
 $\sqrt{16,161} = 127.1 \text{ m}$
- 9) A: $\sin 10^\circ = \frac{Y}{100}$; Y = 17.4 m
- 10) B: $\sin 80^\circ = \frac{X}{100}$; X = 98.5 m
- 11) D: $\tan 30^\circ = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$
- 12) C: $\arcsin .8192 = 55^\circ$
- 13) C: $\frac{2}{60} = .03$; $\frac{21.03}{60} = .35$
 $46 + .36 = 46.35^\circ$
- 14) A
- 15) B