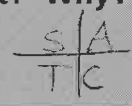


→ 2 answers

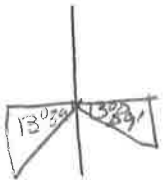
If $0^\circ \leq \theta < 360^\circ$, find each angle correct to the nearest minute.

Degree mode

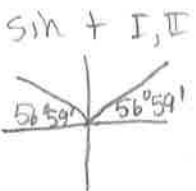
How many solutions should we get? Why?
 2



each function is + in 2 quadrants and - in 2 quadrants



17. $\sin \theta = -0.2361$
 SIM - ref \angle
 $\theta = \sin^{-1}(0.2361) = 13^\circ 39'$
 III = $193^\circ 39'$ IV = $346^\circ 21'$

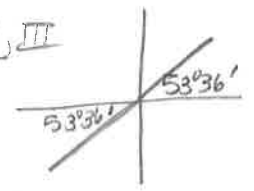


19. $\csc \theta = 1.1927$
 SIM + I, II
 $\sin \theta = \frac{1}{1.1927}$
 $\theta = \sin^{-1}(\frac{1}{1.1927}) \approx 56^\circ 59'$
 I = $56^\circ 59'$, II = $123^\circ 1'$

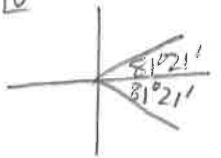


21. $\cos \theta = -0.3514$
 COS - II, III
 $\theta = \cos^{-1}(0.3514)$
 $\theta \approx 69^\circ 26'$
 II = $110^\circ 34'$, III = $249^\circ 26'$

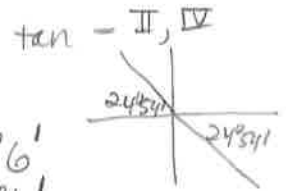
18. $\tan \theta = 1.3564$
 $\theta = \tan^{-1}(1.3564)$
 $\theta \approx 53^\circ 36'$
 I = $53^\circ 36'$, III = $233^\circ 36'$



20. $\cos \theta = 0.1504$
 COS + I, IV
 $\theta = \cos^{-1}(0.1504)$
 $\theta = 81^\circ 21'$
 I = $81^\circ 21'$, IV = $278^\circ 39'$



22. $\cot \theta = -2.1536$
 $\tan \theta = -\frac{1}{2.1536}$
 $\theta = \tan^{-1}(\frac{1}{2.1536})$
 $\theta \approx 24^\circ 54'$
 II = $155^\circ 6'$
 IV = $335^\circ 6'$

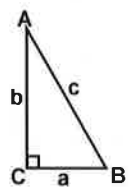


Solve the following right triangles. Sides to the nearest whole number. Angles to the nearest minute.

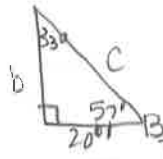
What does it mean to solve a right triangle?

find all of the missing parts

degree mode -
 Use the given info + not rounded answers as you do the problem.
 Make sure \angle s add up to 180° .



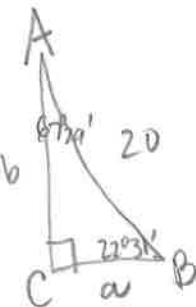
23. $a = 20''$, $A = 33^\circ$, $C = 90^\circ$
 $B = 90^\circ - 33^\circ = 57^\circ$
 $\cos 57^\circ = \frac{20}{c} \Rightarrow c = \frac{20}{\cos 57^\circ} \approx 36.7''$
 $\tan 57^\circ = \frac{b}{20} \Rightarrow b = 20 \tan 57^\circ = 30.8$



24. $a = 15\text{cm}$, $c = 32\text{cm}$
 $b^2 + 225 = 1024$
 $b^2 = 799$
 $b \approx 28.3$
 $\sin A = \frac{15}{32}$
 $A = \sin^{-1}(\frac{15}{32}) \approx 27^\circ 57'$
 $B = 90^\circ - 27^\circ 57' = 62^\circ 3'$



25. $B = 22^\circ 31'$, $c = 20\text{cm}$
 $C = 90^\circ$, $A = 67^\circ 29'$, $a \approx 18.5\text{cm}$, $b \approx 7.7\text{cm}$



$A = 90^\circ - 22^\circ 31' = 67^\circ 29'$
 $\sin 67^\circ 29' = \frac{a}{20} \Rightarrow a = 20 \sin 67^\circ 29' \approx 18.5\text{cm}$
 $\sin 22^\circ 31' = \frac{b}{20} \Rightarrow b = 20 \sin 22^\circ 31' \approx 7.7$