

Answers to AP Precalculus Unit 3 Wkst C

Instructions didn't specify radians or degrees, so either is acceptable.

1. $\theta \approx 1.085$ radians $\approx 62.182^\circ$ (this is the angle formed with the ground)
 $\theta \approx 0.486$ radians $\approx 27.818^\circ$ (this is the angle formed with the wall, which is the usual angle you measure when you measure the "leaning" angle of a ladder)
2. $\theta \approx 0.038$ radians $\approx 2.149^\circ$
3. $\theta = \arctan \frac{s}{750}$; $\theta(400) \approx 0.490$ radians $\approx 28.072^\circ$; $\theta(1600) \approx 1.132$ radians $\approx 64.885^\circ$
4. $\theta = \arcsin \frac{10}{s}$; $\theta(52) \approx 0.194$ radians $\approx 11.087^\circ$; $\theta(26) \approx 0.395$ radians $\approx 22.620^\circ$
5. $\theta = \arctan \frac{6}{x}$; $\theta(10) \approx 0.541$ radians $\approx 30.964^\circ$; $\theta(3) \approx 1.107$ radians $\approx 63.435^\circ$
6. $\theta = \arctan \frac{x}{20}$; $\theta(5) \approx 0.245$ radians $\approx 14.036^\circ$; $\theta(12) \approx 0.540$ radians $\approx 30.964^\circ$
7. $\theta \approx 0.668$ radians $\approx 38.290^\circ$
8. $\theta \approx 0.322$ radians $\approx 18.435^\circ$
9. 0.167 radians or 9.594° (remember compass headings have North = 0° , East = 90° , etc)
10. $\theta \approx 0.384$ radians $\approx 22.024^\circ$