

Triangles Review — Answer Key

1. $x = 5$
2. $\theta = 57^\circ$
3. $x = 7 \tan 35^\circ \approx 4.90$
4. No real value of x ; no such triangle exists.
5. $x = \sqrt{40} = 2\sqrt{10} \approx 6.32$
6. $x = \sqrt{29} \approx 5.39$
7. $x \approx 7.32$
8. $x = \sqrt{25 - 24 \cos 40^\circ} \approx 2.57$
9. $\theta = \arccos\left(\frac{9}{16}\right) \approx 55.77^\circ$
10. $\theta = \arccos\left(\frac{1}{9}\right) \approx 83.62^\circ$
11. $\theta = \arccos\left(\frac{29}{36}\right) \approx 36.34^\circ$
12. $x = \frac{6}{\cos 32^\circ} \approx 7.08$
13. $\theta = 75^\circ$
14. $x = \frac{5 \sin 43^\circ}{\sin 34^\circ} \approx 6.10$
15. $x = \frac{\sqrt{89}}{2} \approx 4.72$
16. $\theta = \arccos\left(\frac{29}{35}\right) \approx 34.05^\circ$
17. $\theta = \arctan\left(\frac{4}{3}\right) \approx 53.13^\circ$
18. $x = \frac{5\sqrt{2} + \sqrt{94}}{2} \approx 8.38$
19. $x = 10 \sin 40^\circ \approx 6.43$
20. $\theta = 60^\circ$