

Cosine Law Drills

Solve the triangle ABC given the following. Round angles to the nearest degree and lengths to 2 decimal places.

1. $A = 70^\circ$, $b = 30.52$ cm, $c = 31.28$ cm.
2. $B = 77^\circ$, $a = 23.98$ cm, $c = 7.44$ cm.
3. $B = 84^\circ$, $a = 96.2$ cm, $c = 25.21$ cm.
4. $C = 53^\circ$, $a = 32.69$ cm, $b = 32.97$ cm.
5. $B = 80^\circ$, $a = 85.94$ cm, $c = 40.8$ cm.
6. $B = 78^\circ$, $a = 36.45$ cm, $c = 32.54$ cm.
7. $B = 62^\circ$, $a = 77.77$ cm, $c = 42.52$ cm.
8. $A = 87^\circ$, $b = 67.27$ cm, $c = 37.75$ cm.
9. $C = 40^\circ$, $a = 47.14$ cm, $b = 37.17$ cm.
10. $a = 51.58$ cm, $b = 55.36$ cm, $c = 40.21$ cm.
11. $A = 76^\circ$, $b = 51.39$ cm, $c = 42.39$ cm.
12. $B = 54^\circ$, $a = 48.02$ cm, $c = 29.58$ cm.
13. $a = 43.43$ cm, $b = 38.13$ cm, $c = 32.88$ cm.
14. $B = 51^\circ$, $a = 26.63$ cm, $c = 26.41$ cm.
15. $C = 47^\circ$, $a = 39.63$ cm, $b = 39.33$ cm.

Answers

1. $B=54^\circ$, $C=56^\circ$, $a=35.46$ cm. 2. $A=85^\circ$, $C=18^\circ$, $b=23.46$ cm. 3. $A=81^\circ$, $C=15^\circ$, $b=96.87$ cm. 4. $A=63^\circ$, $B=64^\circ$, $c=29.3$ cm. 5. $A=73^\circ$, $C=27^\circ$, $b=88.5$ cm. 6. $A=55^\circ$, $C=47^\circ$, $b=43.52$ cm. 7. $A=85^\circ$, $C=33^\circ$, $b=68.93$ cm. 8. $B=63^\circ$, $C=30^\circ$, $a=75.4$ cm. 9. $A=88^\circ$, $B=52^\circ$, $c=30.32$ cm. 10. $A=63^\circ$, $B=73^\circ$, $C=44^\circ$. 11. $B=59^\circ$, $C=45^\circ$, $a=58.17$ cm. 12. $A=88^\circ$, $C=38^\circ$, $b=38.87$ cm. 13. $A=75^\circ$, $B=58^\circ$, $C=47^\circ$. 14. $A=65^\circ$, $C=64^\circ$, $b=22.84$ cm. 15. $A=67^\circ$, $B=66^\circ$, $c=31.49$ cm.