

Cosine Law Drills

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

1. $A = 67^\circ$, $b = 13.3$ cm, $c = 10.65$ cm.
2. $B = 73^\circ$, $a = 61.32$ cm, $c = 26.17$ cm.
3. $C = 74^\circ$, $a = 6.99$ cm, $b = 7.76$ cm.
4. $B = 68^\circ$, $a = 28.03$ cm, $c = 28.7$ cm.
5. $a = 10.1$ cm, $b = 11.27$ cm, $c = 9.26$ cm.
6. $C = 65^\circ$, $a = 21.92$ cm, $b = 25.93$ cm.
7. $C = 49^\circ$, $a = 41.65$ cm, $b = 40.02$ cm.
8. $a = 37.32$ cm, $b = 31.34$ cm, $c = 38.22$ cm.
9. $B = 81^\circ$, $a = 50.82$ cm, $c = 32.43$ cm.
10. $B = 52^\circ$, $a = 5.14$ cm, $c = 6.94$ cm.
11. $B = 73^\circ$, $a = 13.59$ cm, $c = 13.77$ cm.
12. $C = 24^\circ$, $a = 21.48$ cm, $b = 20.08$ cm.
13. $C = 68^\circ$, $a = 25.49$ cm, $b = 19.1$ cm.
14. $C = 76^\circ$, $a = 33.43$ cm, $b = 33.43$ cm.
15. $B = 70^\circ$, $a = 14.76$ cm, $c = 8.25$ cm.

Answers

1. $B=66^\circ$, $C=47^\circ$, $a=13.4$ cm. 2. $A=82^\circ$, $C=25^\circ$, $b=59.22$ cm. 3. $A=49^\circ$, $B=57^\circ$, $c=8.9$ cm.
4. $A=55^\circ$, $C=57^\circ$, $b=31.73$ cm. 5. $A=58^\circ$, $B=71^\circ$, $C=51^\circ$. 6. $A=50^\circ$, $B=65^\circ$, $c=25.93$ cm.
7. $A=68^\circ$, $B=63^\circ$, $c=33.9$ cm. 8. $A=64^\circ$, $B=49^\circ$, $C=67^\circ$. 9. $A=64^\circ$, $C=35^\circ$, $b=55.84$ cm.
10. $A=47^\circ$, $C=81^\circ$, $b=5.54$ cm. 11. $A=53^\circ$, $C=54^\circ$, $b=16.28$ cm. 12. $A=87^\circ$, $B=69^\circ$, $c=8.75$ cm.
13. $A=68^\circ$, $B=44^\circ$, $c=25.49$ cm. 14. $A=52^\circ$, $B=52^\circ$, $c=41.16$ cm. 15. $A=77^\circ$, $C=33^\circ$, $b=14.23$ cm.