

Laws of sines and cosines — Use the law of cosines

Name: _____

Date: _____



Use the law of cosines. Round each length to one decimal place.

1 In $\triangle ABC$, $a = 6$, $b = 9$, $\angle C = 65^\circ$. Find c : _____

2 In $\triangle ABC$, $a = 6$, $b = 11$, $\angle C = 35^\circ$. Find c : _____

3 In $\triangle ABC$, $a = 5$, $b = 8$, $\angle C = 60^\circ$. Find c : _____

4 In $\triangle ABC$, $a = 8$, $b = 10$, $\angle C = 30^\circ$. Find c : _____

5 In $\triangle ABC$, $a = 5$, $b = 7$, $\angle C = 80^\circ$. Find c : _____

6 In $\triangle ABC$, $a = 8$, $b = 12$, $\angle C = 50^\circ$. Find c : _____

7 In $\triangle ABC$, $a = 10$, $b = 6$, $\angle C = 45^\circ$. Find c : _____

8 In $\triangle ABC$, $a = 9$, $b = 9$, $\angle C = 70^\circ$. Find c : _____



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— Answer key



1. In $\triangle ABC$, $a = 6$, $b = 9$, $\angle C = 65^\circ$. Find c : 8.4

2. In $\triangle ABC$, $a = 6$, $b = 11$, $\angle C = 35^\circ$. Find c : 7.0

3. In $\triangle ABC$, $a = 5$, $b = 8$, $\angle C = 60^\circ$. Find c : 7.0

4. In $\triangle ABC$, $a = 8$, $b = 10$, $\angle C = 30^\circ$. Find c : 5.0

5. In $\triangle ABC$, $a = 5$, $b = 7$, $\angle C = 80^\circ$. Find c : 7.9

6. In $\triangle ABC$, $a = 8$, $b = 12$, $\angle C = 50^\circ$. Find c : 9.2

7. In $\triangle ABC$, $a = 10$, $b = 6$, $\angle C = 45^\circ$. Find c : 7.2

8. In $\triangle ABC$, $a = 9$, $b = 9$, $\angle C = 70^\circ$. Find c : 10.3