

## Law of Cosines

$$c^2 = a^2 + b^2 - 2ab \cos C$$

1. In triangle ABC, side AB measures 8 inches, side BC measures 6 inches, and angle B measures 60 degrees. Find the length of side AC.
2. Triangle DEF has side DE measuring 12 meters, side EF measuring 9 meters, and angle E measuring 45 degrees. Find the length of side DF.
3. In triangle GHI, side GH measures 15 centimeters, side HI measures 10 centimeters, and angle G measures 70 degrees. Find the length of side GI.
4. Triangle JKL has side JK measuring 14 meters, side KL measuring 10 meters, and angle J measuring 80 degrees. Find the length of side JL.
5. In triangle MNO, side MN measures 18 inches, side NO measures 12 inches, and angle M measures 60 degrees. Find the length of side MO.
6. Triangle PQR has side PQ measuring 20 feet, side PR measuring 16 feet, and angle P measuring 35 degrees. Find the length of side QR.
7. In triangle STU, side ST measures 14 meters, side SU measures 11 meters, and angle S measures 50 degrees. Find the length of side TU.
8. Triangle VWX has side VW measuring 16 centimeters, side WX measuring 12 centimeters, and angle V measuring 25 degrees. Find the length of side VX.
9. In triangle YZA, side YZ measures 24 inches, side ZA measures 20 inches, and angle Y measures 70 degrees. Find the length of side ZY.
10. Triangle BCD has side BC measuring 18 meters, side CD measuring 15 meters, and angle B measuring 75 degrees. Find the length of side BD.