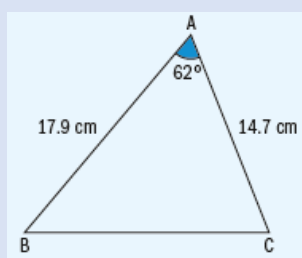


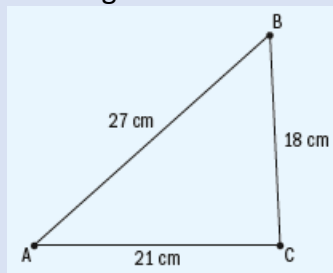
Chapter 11 / Example 11

Using the cosine rule

a Find side BC:



b Find angle A:



Press **[mode]**.

Use the **[◀]** **[▶]** **[↶]** **[↷]** keys to place the cursor on DEGREE in the Mode menu, and then press **[enter]** to highlight it.

Press **[2nd]** **[quit]** to return to the home screen.

```
MATHPRINT CLASSIC
NORMAL SCI ENG
FLOAT 0 1 2 3 4 5 6 7 8 9
RADIAN DEGREE
FUNCTION PARAMETRIC POLAR SEQ
THICK DOT-THICK THIN DOT-THIN
SEQUENTIAL SIMUL
REAL a+bi re^(θi)
FULL HORIZONTAL GRAPH-TABLE
FRACTIONTYPE: n/d Un/d
ANSWERS: AUTO DEC FRAC-APPROX
GO TO 2ND FORMAT GRAPH: NO YES
STAT DIAGNOSTICS: OFF ON
STAT WIZARDS: ON OFF
SET CLOCK 09/07/18 8:28PM
```

$$a^2 = 14.7^2 + 17.9^2 - 2 \times 14.7 \times 17.9 \cos 62$$

Use your GDC enter the expression

$$\sqrt{14.7^2 + 17.9^2 - 2 \times 14.7 \times 17.9 \cos 62} \text{ directly.}$$

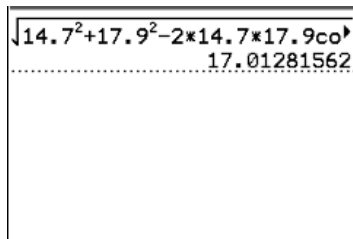
Press **[2nd]** **[x²]** (**[√]**)



Type 14.7 **[x²]** **[+]** 17.9 **[x²]** **[-]** 2 **[x]** 14.7 **[x]** 17.9 **[cos]** 62

Close the parentheses and press **[enter]**.

$$a = 17.0$$

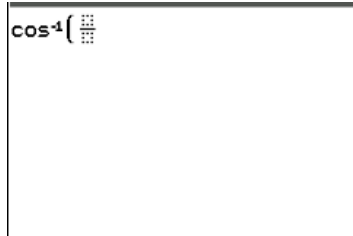


$$\cos A = \frac{21^2 + 27^2 - 18^2}{2 \times 21 \times 27}$$

Use your GDC enter the expression

$$\cos^{-1} \left(\frac{21^2 + 27^2 - 18^2}{2 \times 21 \times 27} \right)$$

Type **[2nd]** **[cos]** (**[cos⁻¹]**) and insert the fraction template by pressing **[ALPHA]** **[f1]** 1:n/d



Chapter 11 / **Example 11**

Using the cosine rule

Type 21 $\boxed{x^2}$ $\boxed{+}$ 27 $\boxed{x^2}$ $\boxed{-}$ 18 $\boxed{x^2}$ in the numerator.

Press $\boxed{\downarrow}$ to move to the denominator and type 2 $\boxed{\times}$ 21 $\boxed{\times}$ 27

Press $\boxed{\rightarrow}$ and close the parentheses.

Press $\boxed{\text{enter}}$.

$A = 41.8^\circ$

The calculator screen displays the cosine rule formula: $\cos^{-1}\left(\frac{21^2 + 27^2 - 18^2}{2 \times 21 \times 27}\right)$. The result, 41.7522052, is shown below the formula.