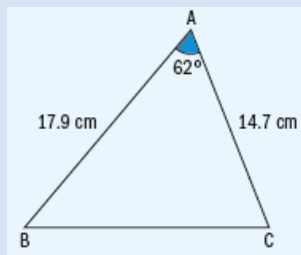


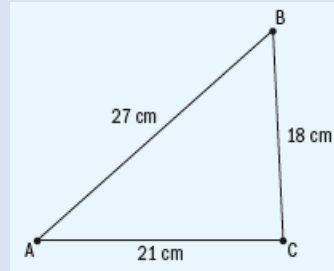
Chapter 11 / Example 11

Using the cosine rule

a Find side BC:



b Find angle A:



Press **MENU** 1 **RUN-MAT** to display the Run-Matrix screen for arithmetical calculations.

Press **SHIFT** **MENU** (SETUP)

Scroll down using **▼** to Angle and change the setting to **F1** Deg.

Press **EXIT**.

```
Input/Output: Math
Mode          : Comp
Frac Result   : d/c
Func Type     : Y=
Draw Type     : Connect
Derivative    : Off
Angle         : Deg
Deg Rad Gra
```

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

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 **SHIFT** **x²** ($\sqrt{\quad}$)

```
√□
JUMP DELETE ▶ MAT/VCT MATH
```

Type 14.7 **x²** **+** 17.9 **x²** **-** 2 **×** 14.7 **×** 17.9 **cos** 62

Press **EXE**.

$$a = 17.0$$

```
√14.7^2+17.9^2-2×14.7×17.9cos62
17.01281562
□
JUMP DELETE ▶ MAT/VCT MATH
```

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

Use your GDC enter the expression

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

Type **SHIFT** **cos** (\cos^{-1}) and insert the fraction template by pressing **□**

```
√14.7^2+17.9^2-2×14.7×17.9cos62
17.01281562
cos⁻¹ □
DEL-LINE DEL-ALL
```

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

Press \boxed{EXE} .

$A = 41.8^\circ$

$$\cos^{-1} \frac{\sqrt{14.7^2 + 17.9^2 - 2 \times 14.7 \times 17.9}}{2 \times 21 \times 27}$$

17.01281562
41.7522052

$\boxed{\square}$
 $\boxed{JUMP} \boxed{DELETE} \boxed{MAT/VCT} \boxed{MATH}$