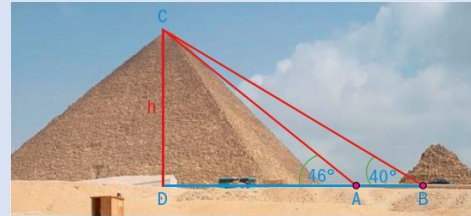


Chapter 6 / **Example 14**

Finding lengths using the sine rule

The illustration to the right shows the angles of elevation of the highest point of the Great Pyramid of Giza, measured from two observation points A and B. The angle of elevation at A is 46° and the angle of elevation at B is 40° . Given that A and B are 35 m apart, find the height of the pyramid, h .



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
```

$$CB = \frac{35 \sin 134^\circ}{\sin 6^\circ}.$$

Press **□** to add a fraction template.

Type 35 **sin** 134 in the numerator.

Press **▼** to move to the denominator.

Type **sin** 6 and close the parentheses. Press **EXE**.

```
□
□
JUMP DELETE MAT/VCT MATH
```

$$CB = 241 \text{ m to 3sf.}$$

```
35sin 134
sin 6      240.861601
□
JUMP DELETE MAT/VCT MATH
```

$$h = 241 \sin 40^\circ.$$

Using your GDC enter the expression $241 \times \sin 40^\circ$, copying the value found for CB by pressing **SHIFT** Ans.

$$h = 155 \text{ m.}$$

```
35sin 134
sin 6      240.861601
Ans×sin 40  154.8228528
□
JUMP DELETE MAT/VCT MATH
```