

Chapter 6 / **Example 11****Finding an angle using the cosine rule**

In triangle PQR, PQ = 9 cm, QR = 16 cm and PR = 11 cm. Find the smallest angle in the triangle to the nearest degree.

Open a new document and add a Calculator page.

Use the touchpad to click on the wheel icon in the page header.

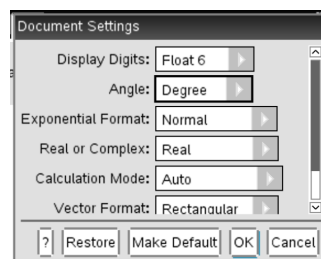


Select 2:Document Settings...

Select 'Degree' as the unit for Angle.

Use the touchpad to select OK or click **enter**.

The page header should now show 'DEG'.



$$\cos A = \frac{16^2 + 11^2 - 9^2}{2 \times 16 \times 11}$$

Use your GDC enter the expression

$$\cos^{-1} \left(\frac{16^2 + 11^2 - 9^2}{2 \times 16 \times 11} \right)$$

Press **trig** and select \cos^{-1} from the menu with the touchpad.

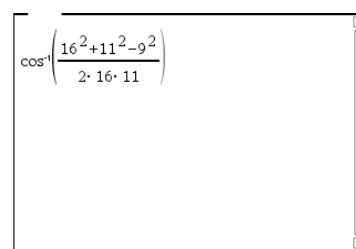
sin	cos	tan	csc	sec	cot
sin ⁻¹	cos⁻¹	tan ⁻¹	csc ⁻¹	sec ⁻¹	cot ⁻¹

Type **ctrl** **÷** ($\frac{\square}{\square}$) to enter the fraction template.

Type 16 **x²** **+** 11 **x²** **-** 9 **x²** in the numerator.

Press **▼** to move to the denominator and type

2 **x** 16 **x** 11 and press **enter**.



$$A = 33^\circ$$

