

Chapter 1 / **Example 9**

Using the sine rule to find an angle

In a triangle $\triangle DEF$, $DE = 12$ cm, $EF = 14$ cm and $\hat{D}EF = 45^\circ$.

Draw a labelled diagram and find the size of the angle $\hat{E}FD$ 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.

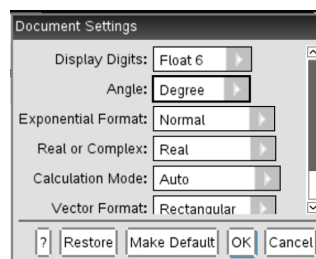


Select 2:Document Settings...

Select 'Degree' as the unit for Angle.

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

The page header should now show 'DEG'.

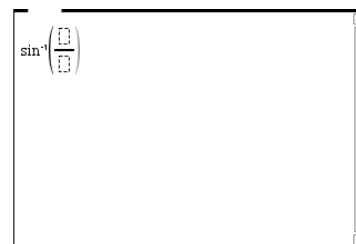


$$\sin \hat{E}FD = \frac{12 \sin 45}{14}$$

Using your GDC enter the expression $\hat{E}FD = \sin^{-1}\left(\frac{12 \sin 45}{14}\right)$ directly.

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

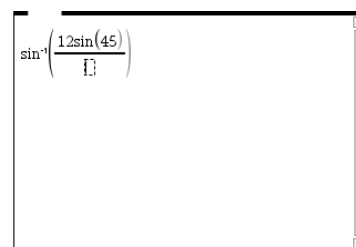
Press **ctrl** **÷** **frac** to enter a fraction template.



Type 12 in the numerator.

To enter sin press **trig** and select sin from the menu with the touchpad.

Type 45 and then **▼** to move to the denominator.



Type 14 in the denominator and press **enter**.

$\hat{E}FD = 37^\circ$ (to the nearest degree).

