Chapter 10 / **Example 13**
Find the area of a region bounded by curves

<A short introductory text, where appropriate>

Find the area of the region bounded by the curves $f(x)=e^{2x}+1$ and $g(x)=x+4$.

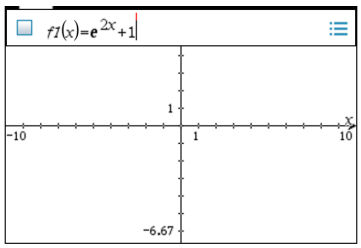
Open a new document and add a Graphs page.

The entry line is displayed at the top of the work area.

The default graph type is function, so '*f1*(*x*)=' is displayed.

The default axes are $-10 \le x \le 10$ and $-6.67 \le y \le 6.67$.

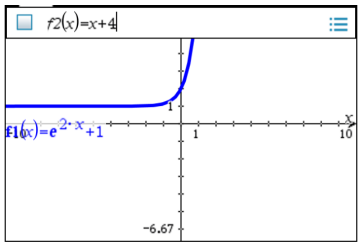
Type [e^x] [2] [X] ▶ [+] [1] and press [enter].



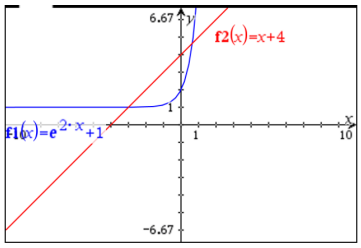
The GDC displays the curve $f1(x)=e^{2x}+1$ in the default window.

Press [tab] to display the entry line again. This time '*f2*(*x*)=' is displayed.

Type $x+4$ and press [enter].



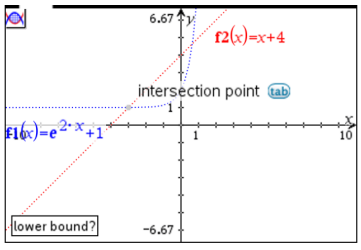
The GDC displays the curve $f1(x)=e^{2x}+1$ and the line $f2(x)=x+4$ in the default window.



To find the area bounded by the two curves press [menu] 6:Analyze Graph | 7:Bounded Area

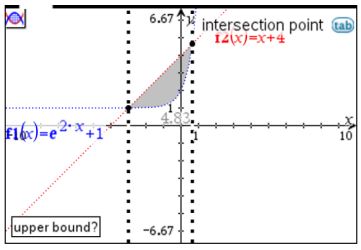
Use the touchpad to move the cursor to the first of the two intersection points. The GDC displays the words 'intersection point' when you are close enough.

Click the touchpad.



Use the touchpad to move the cursor to the second of the two intersection points. The GDC displays the words 'intersection point' when you are close enough.

Click the touchpad again.



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The GDC displays a shaded region between the two curves and the value of its area.

The area of the region is 4.83.