

Name:

**Math 10a**

September 4, 2014

Quiz #0 (Practice; Does not count)

1. (a) A scientist models the height of a plant after  $n$  days as

$$h = C_1\sqrt{n} + C_2$$

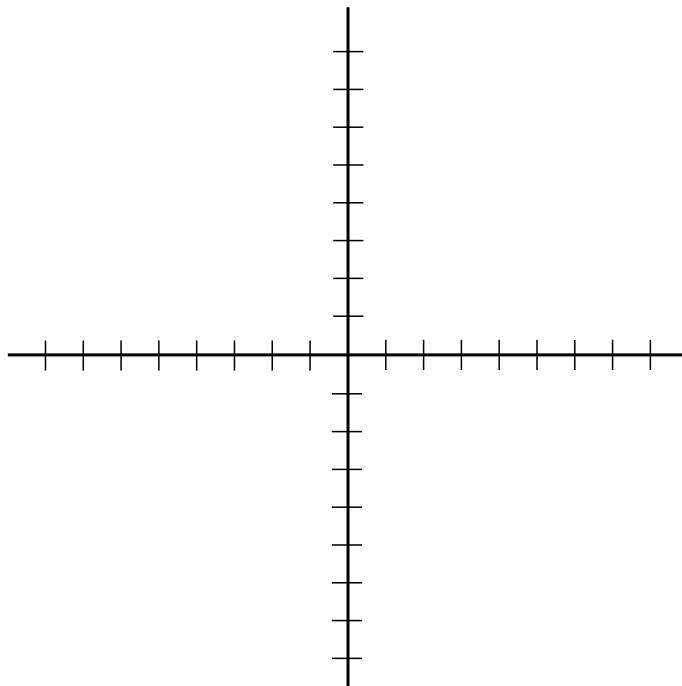
for some constants  $C_1$  and  $C_2$ . If initially (after 0 days) the plant is 3 inches tall and after 25 days it is 23 inches tall, what are the values of  $C_1$  and  $C_2$ ?

- (b) What is  $n$  as a function of  $h$ ?

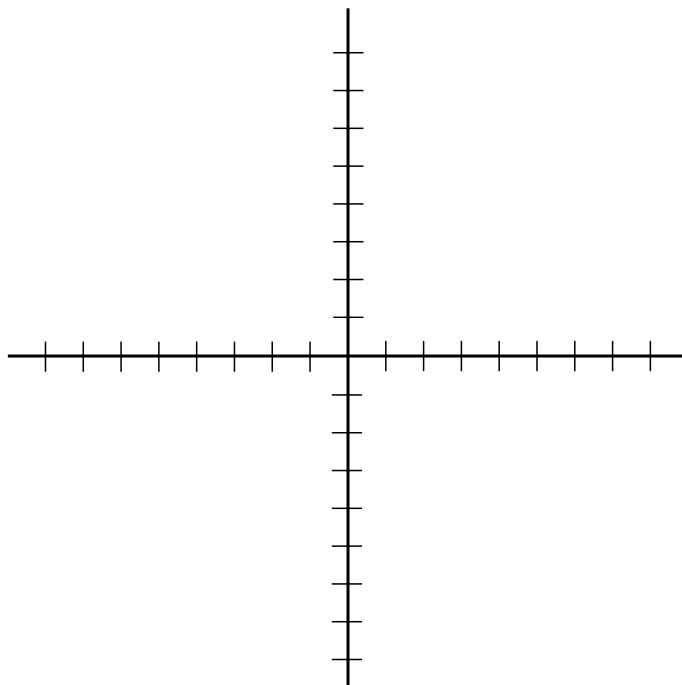
2. Solve for  $x$ :

$$\log_2(x + 3) + \log_2(x + 1) = 3.$$

3. Draw the graphs of  $y = e^x$  and  $y = 2^x$  on the coordinate system below?



4. Draw the graph of  $6 \cdot 2^{x-2} - 3$  on the coordinate system below. Label the  $x$  and  $y$  intercepts.



5. If you continued to draw the previous graph to the limits of the  $x$ -axis, it would go off the page. About how many pages would you need to add to the top to be able to complete the graph?