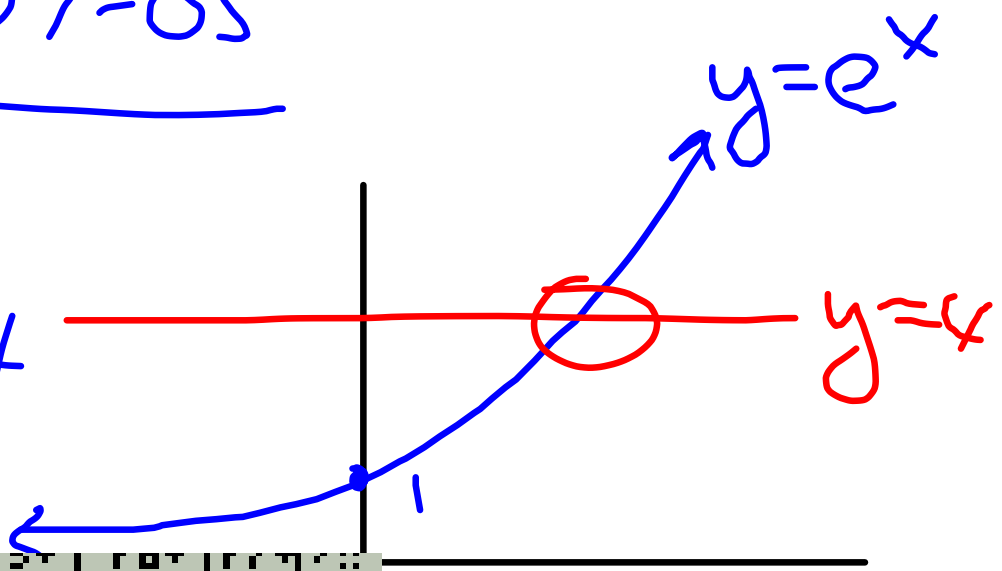
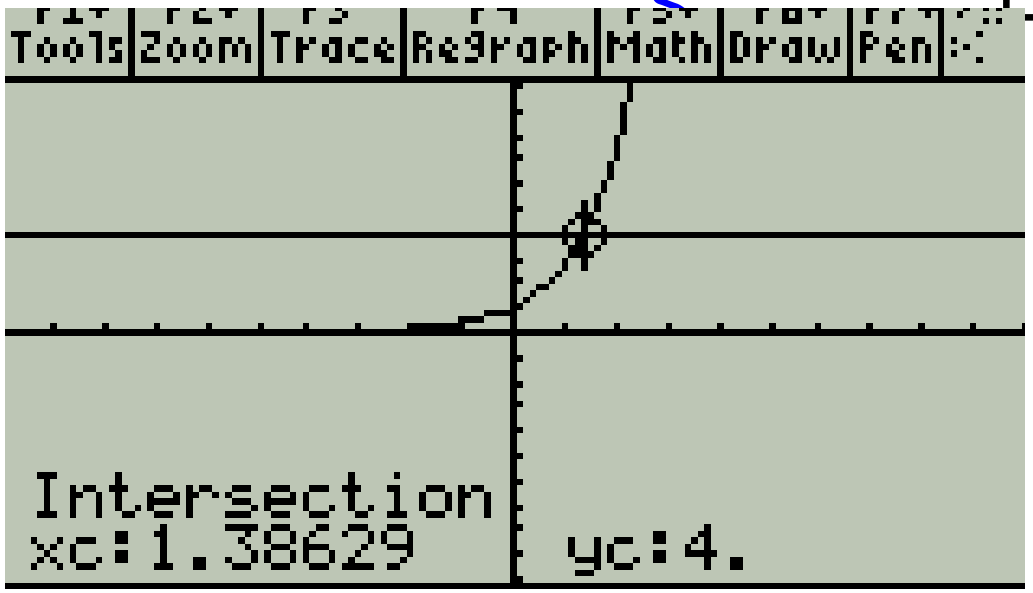
WED 9-07-05

P. 24

(16) $e^x = 4$





$x \doteq 1.386$

P. 24

13 $\left(\frac{1}{8}\right)^{2x} = 2^{?}$

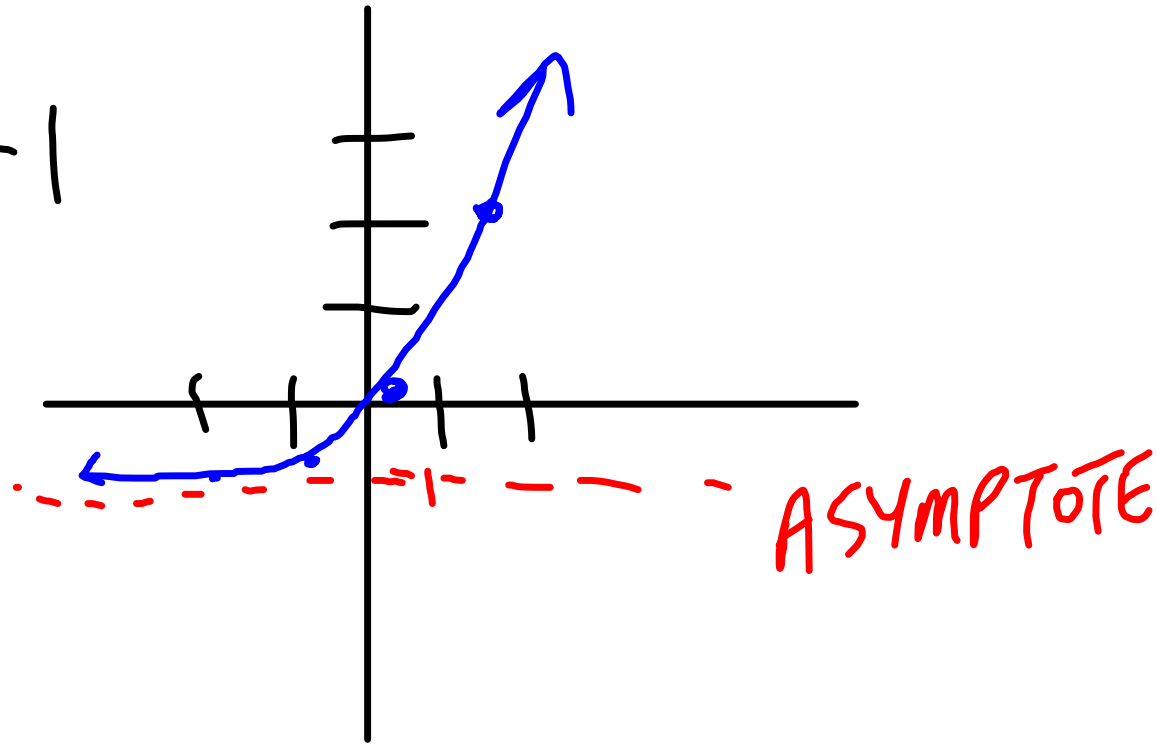
$= \left(\frac{1}{2^3}\right)^{2x}$

$= \left(2^{-3}\right)^{2x}$

$= 2^{-6x}$

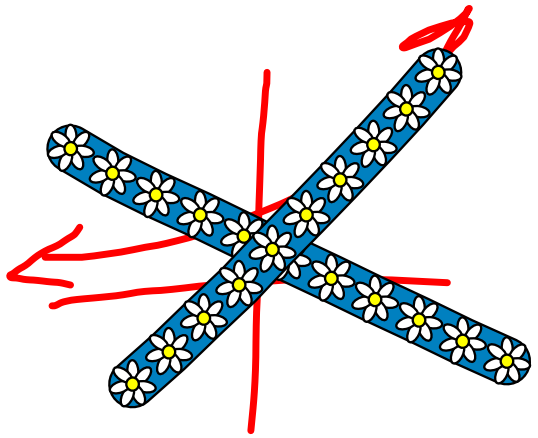
B-G

38 $y = 3^x - 1$



B-6

(11) $y = x^2 + 8x + 12$



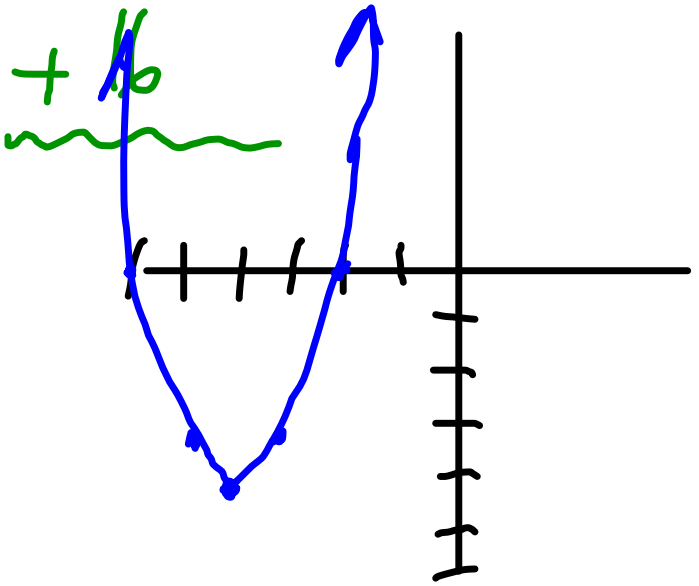
COMP. THE SQUARE

$y - 12 + 16 = x^2 + 8x + 16$

$y + 4 = (x+4)^2$

$y = (x+4)^2 - 4$

$\leftarrow 4 \qquad \downarrow 4$



B-G

(68)

$(x-h)^2+(y-k)^2=r^2$

C: (0, 3)

r = 2

$x^2+(y-3)^2=4$

$(y-3)^2=4-x^2$

$y-3=\pm\sqrt{4-x^2}$

$y=\pm\sqrt{4-x^2}+3$

(64) (4, −1)

$y=\sqrt{9-x^2}$

$y=-\sqrt{9-(x-4)^2}$

$y=-\sqrt{9-(x-4)^2}-5$

THUR TEST

- TI-89
- B-G
- 1-1, 1-2, 1-3

1-3 (NEWER "STUFF")

Ex) SUPPOSE THE RADIOACTIVE SUBSTANCE REARDONIUM HAS A HALF-LIFE OF 15 DAYS. IF THERE ARE 8 g OF THIS NOW, WHEN WILL THERE BE 2.5 g? (TO THE NEAREST HOUR)

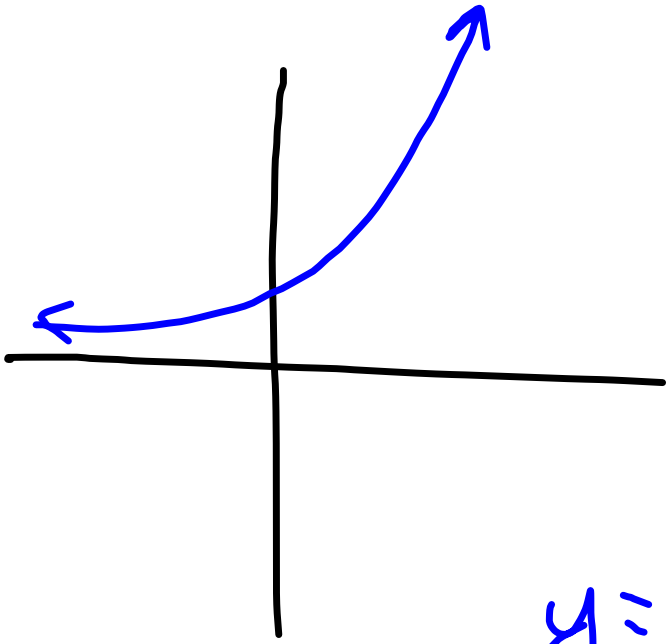
# OF DAYS	# OF g
0	8
15	$4 = \frac{1}{2}(8)$
30	$2 = \frac{1}{2}\left(\frac{1}{2}(8)\right)$
45	$1 = \frac{1}{2}\left(\frac{1}{2}\left(\frac{1}{2}(8)\right)\right)$
t	

$\left(\frac{1}{2}\right)^{\frac{t}{15}} \cdot 8$

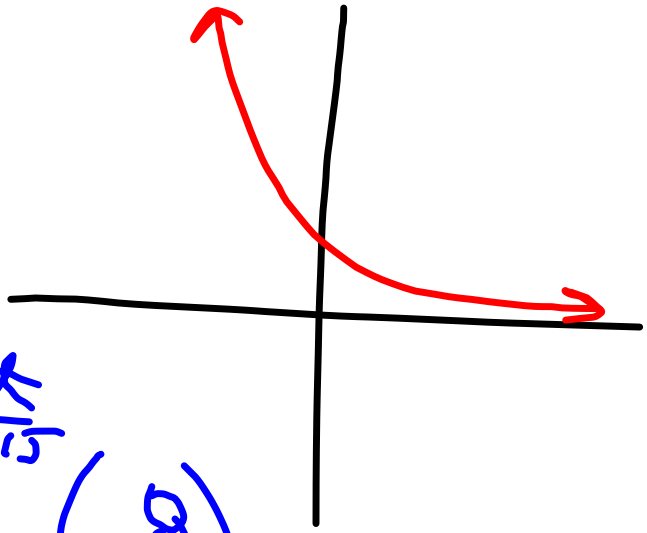
$R(t) = \left(\frac{1}{2}\right)^{\frac{t}{15}} \cdot 8$

EXPONENTIAL DECAY

EXP. GROWTH



EXP. DECAY



$$y = \left(\frac{1}{2}\right)^{\frac{x}{15}}(8)$$

$$y = 8\left(\frac{1}{2}\right)^{\frac{x}{15}}$$