

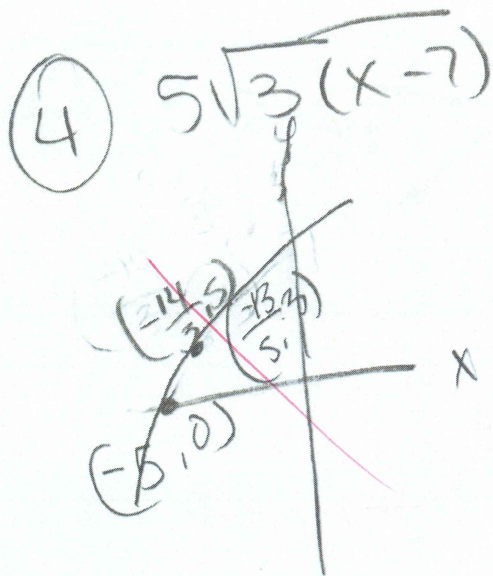
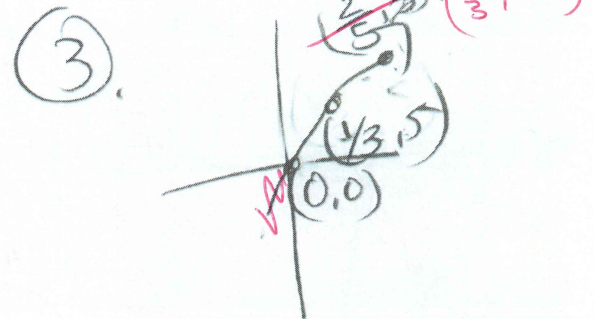
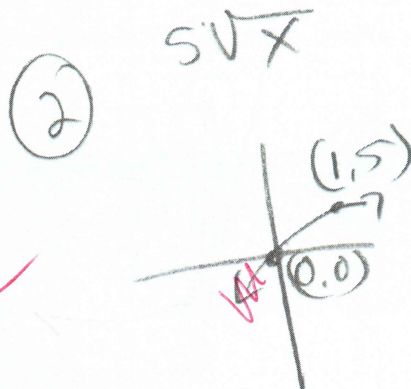
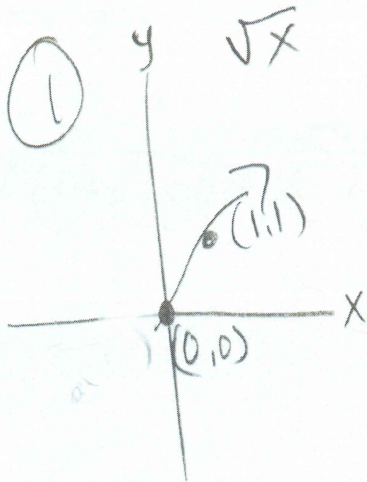
MAT 121

Wp #2

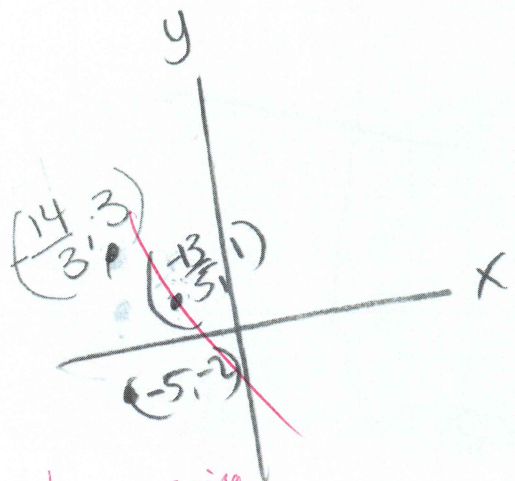
Cacher0

16
50

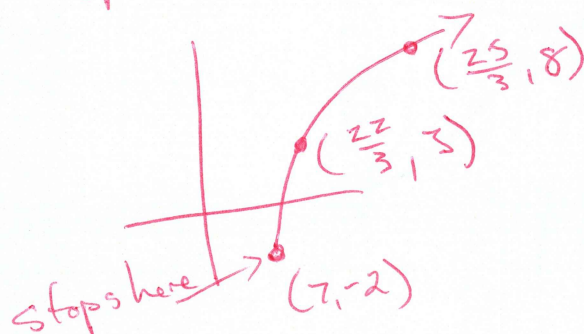
① $g(x) = 5\sqrt{3x-21}-2$
 $= 5\sqrt{3(x-7)}-2$



⑤ $5\sqrt{3(x-7)}-2$



Ends up being --- keeps going



+2

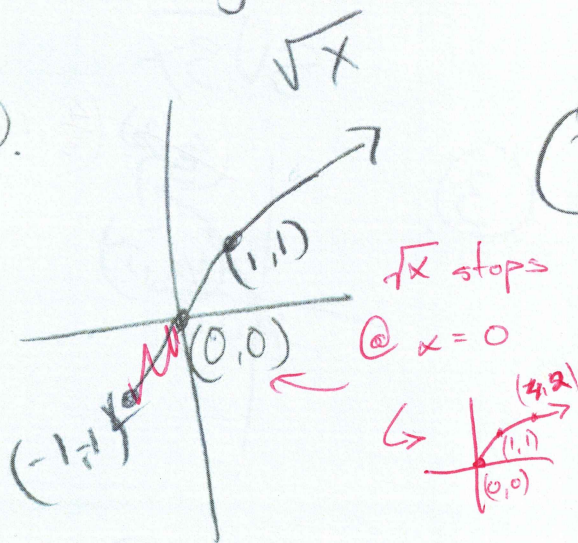
MAT 121

WP 2

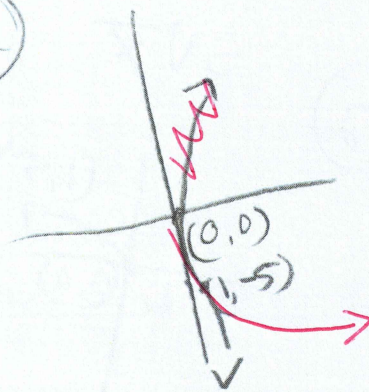
Cachero

② $g(x) = -5\sqrt{3x-21} + 2$

①.



②



① $\sqrt{x}$

② $-5\sqrt{x}(1-5)$

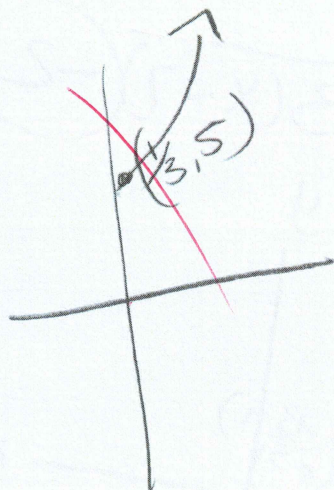
③ $-5\sqrt{3}(\frac{1}{3}, -5)$

④ $-5\sqrt{3}(x+7)^{\frac{1}{3}}$
 $(\frac{22}{3}, -5)$

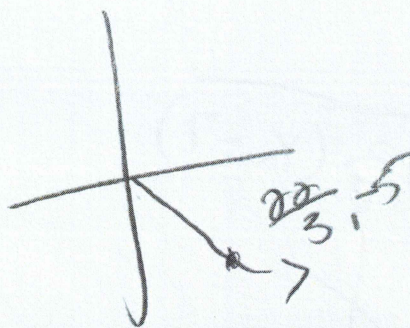
⑤ $-5\sqrt{3}(x+7) + 2$

$-\sqrt{x} \rightarrow$

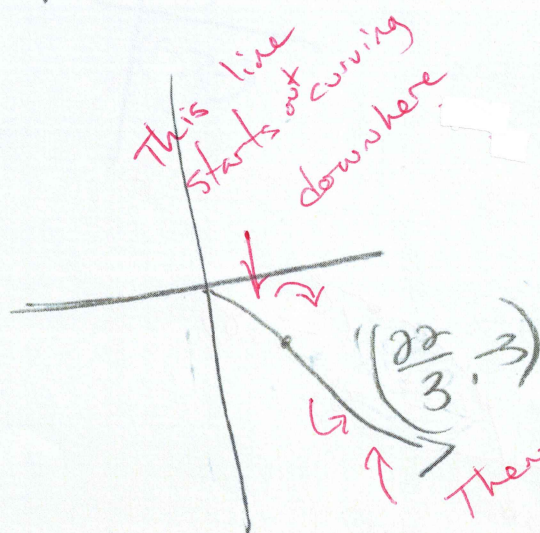
③



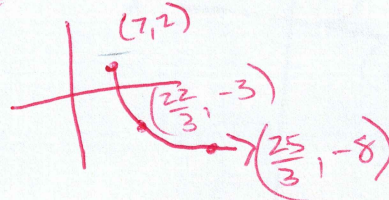
④



⑤



Ends up as...



Then curves up here...

mat121

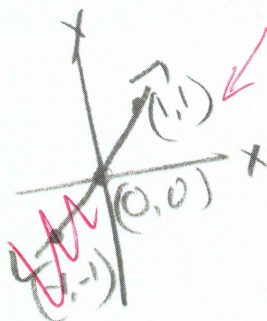
wp #2

lachenro

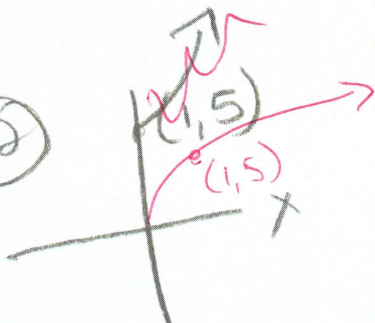
(3) $g(x) = 5\sqrt{-3x-21}-11$

$\sqrt{x}$ curves!

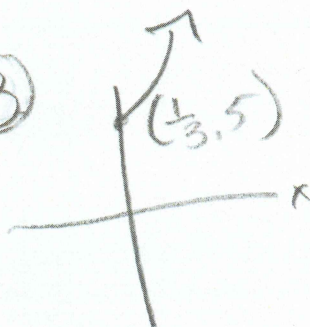
(1)



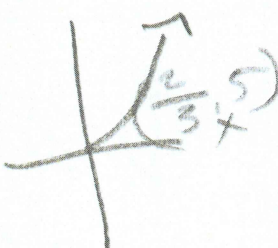
(2)



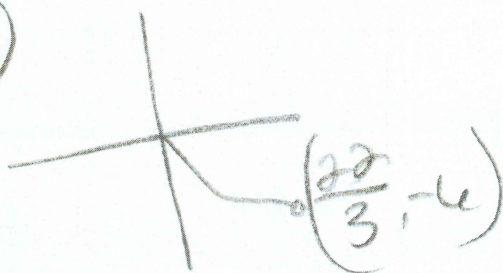
(3)



(4)



(5)



(1) $\sqrt{x} = (1,1)$

(2) $5\sqrt{x} = (1,5)$

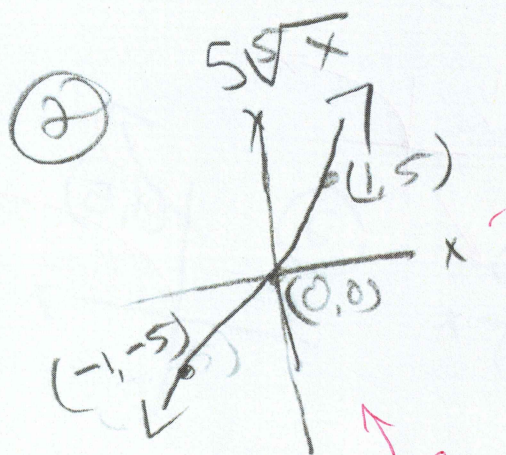
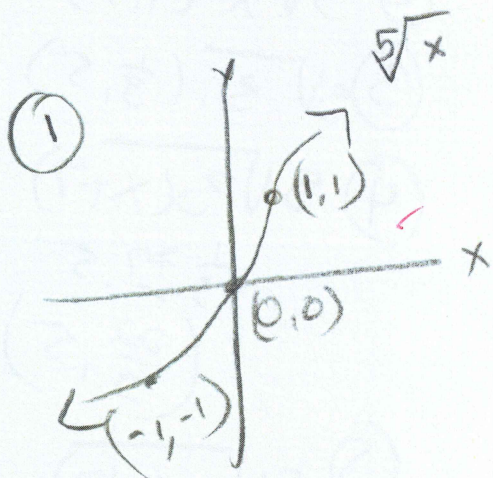
(3) $5\sqrt{3} = (\frac{1}{3}, 5)$

(4) $5\sqrt{3(x+7)}$
 $\frac{1}{3} \rightarrow 7.5$
 $(\frac{22}{3}, 5)$

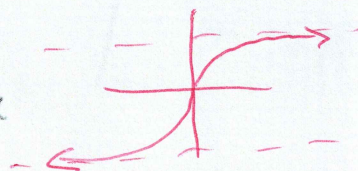
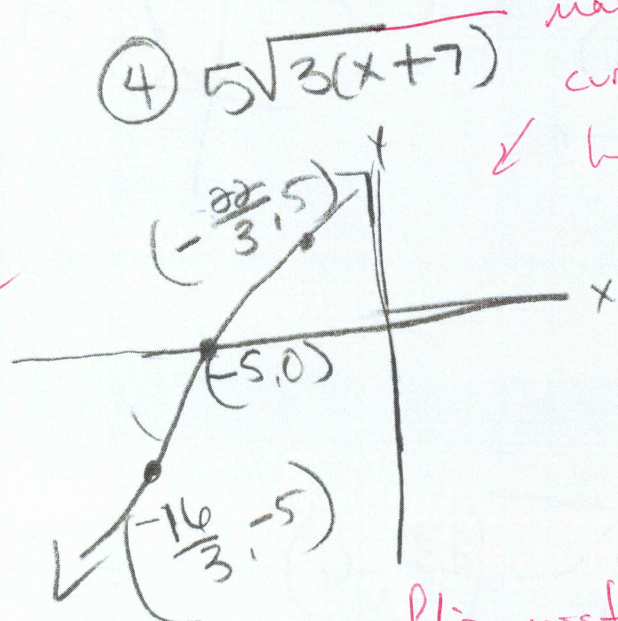
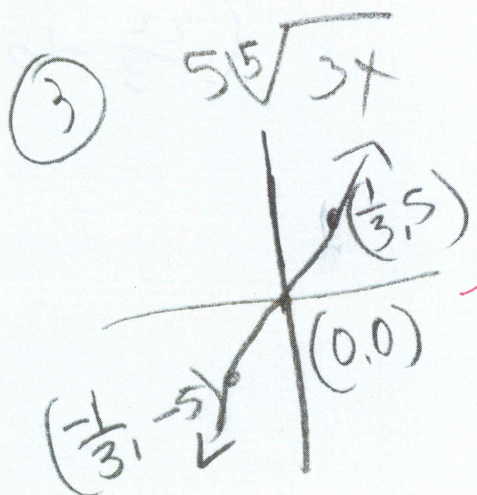
(5) $5\sqrt{3(x+7)}-11$
 $(\frac{22}{3}, -6)$

no #4?

⑤ $g(x) = 5\sqrt[5]{3x+21} - 6$

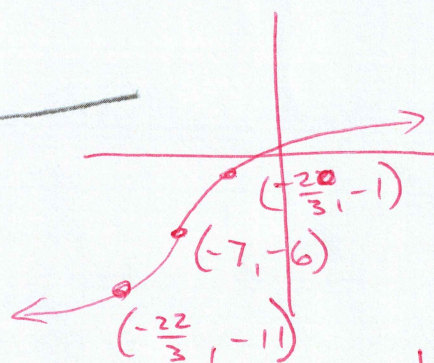
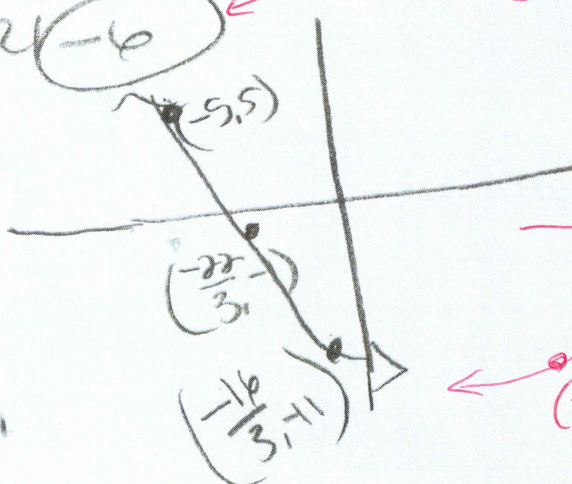


Curve is unclear, make sure they curve toward horizontal

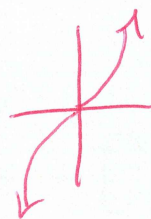


⑤ $5\sqrt[5]{3x+21} - 6$

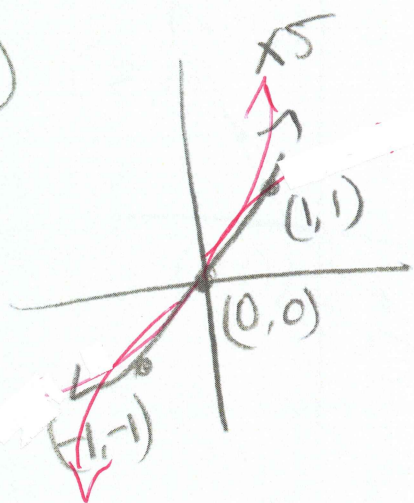
no flip, just shift



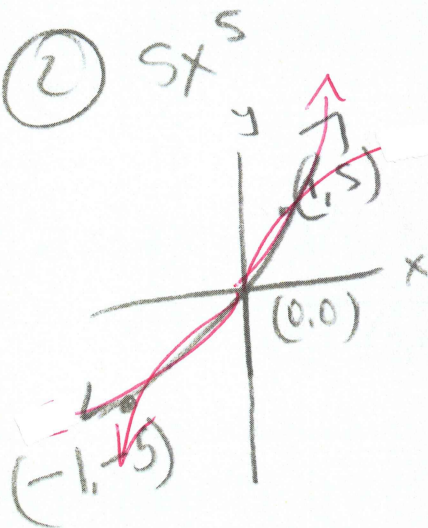
⑥ $g(x) = 5(3x+21)^5 - 4$



①

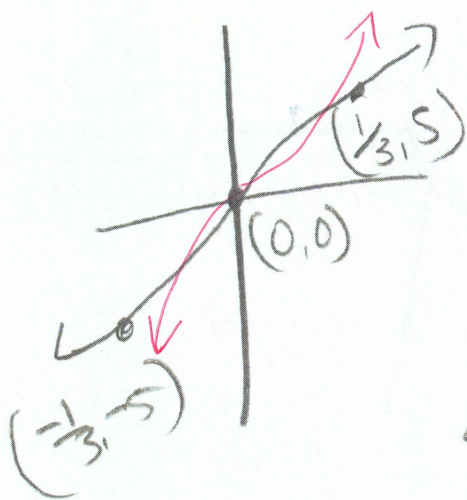


②

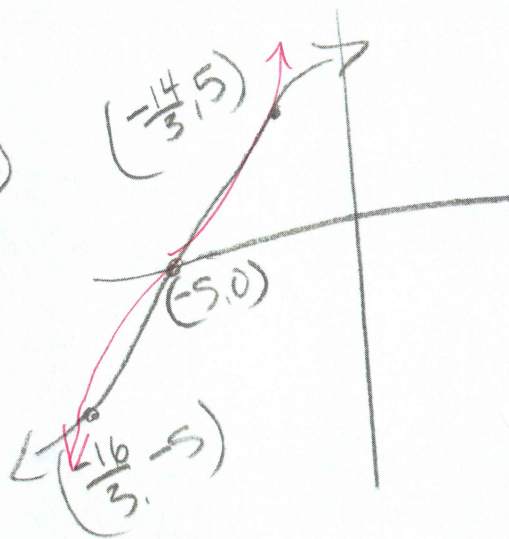


Sorry, I started making the marks the wrong way--

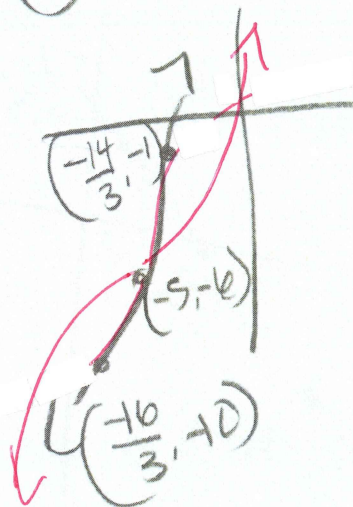
③ $5(3x)^5$



④ $5(3(x+\overset{7}{5}))^5$



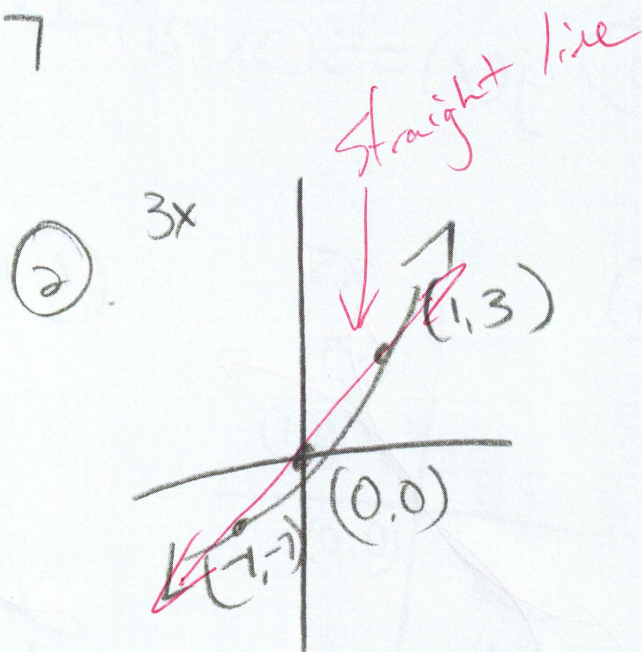
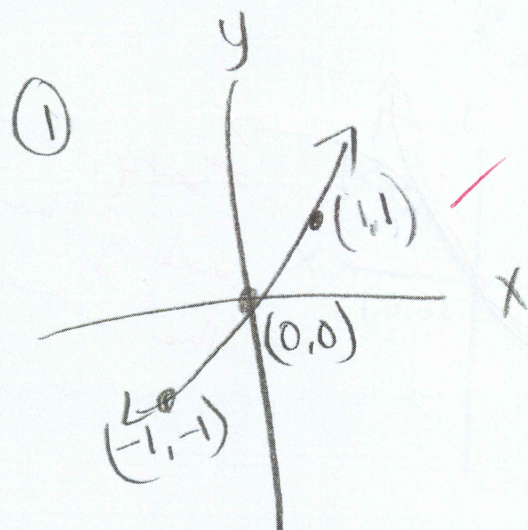
⑤ $g(x) = 5(3x+21)^5 - 6$



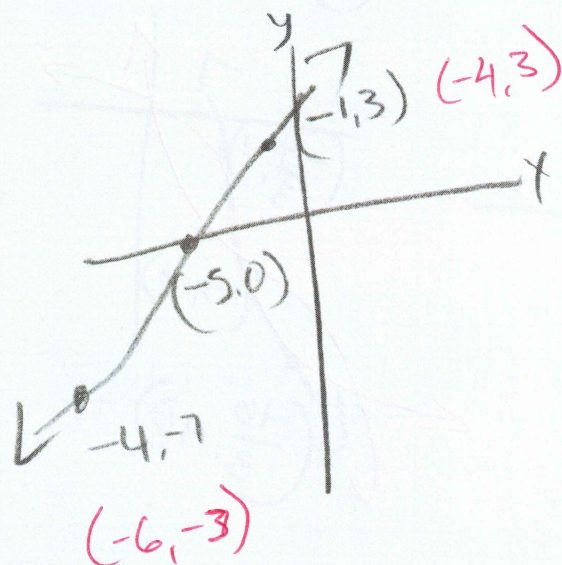
The "5" instead of a "7" threw off your final

+3.5

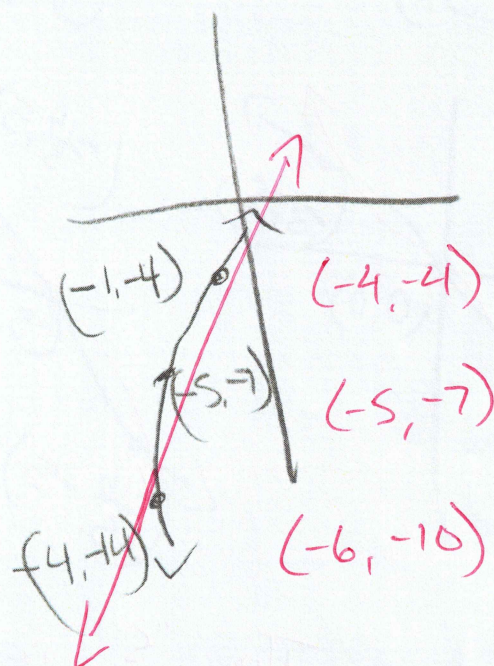
$$\textcircled{1} g(x) = 3(x+5) - 7$$



$$\textcircled{3} 3(x+5)$$



$$\textcircled{4} 3(x+5) - 7$$



Mat 121

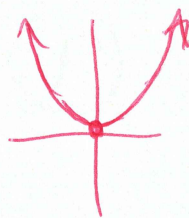
wp #2

Cashero

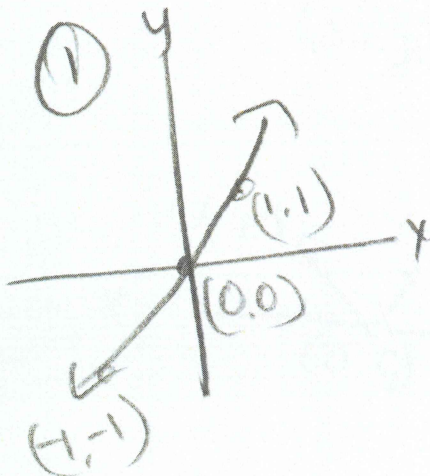
⑧ $g(x) = 3(x+5)^2 - 7$
 $f(x) = x^2$

Start @

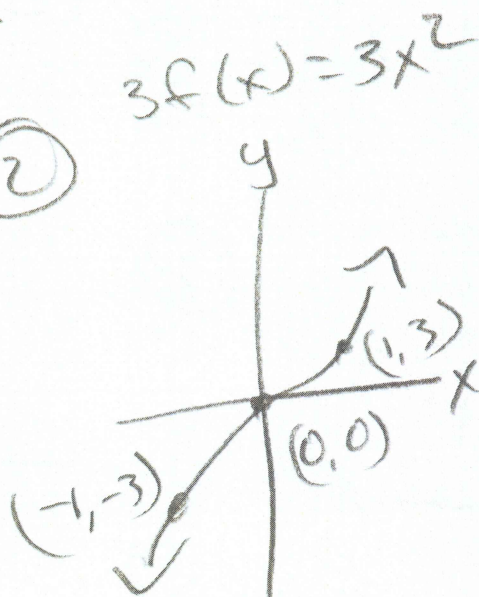
$x^2 \Rightarrow$



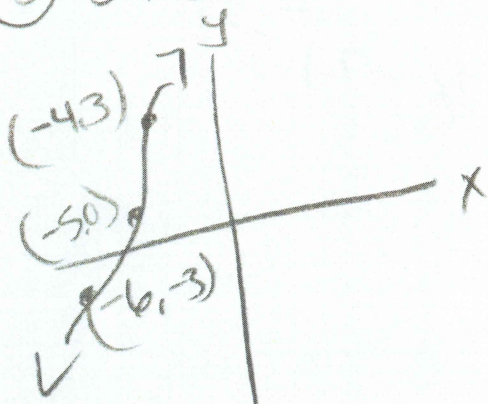
①



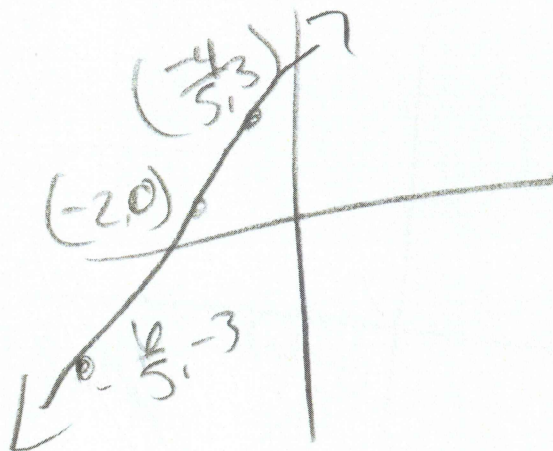
②



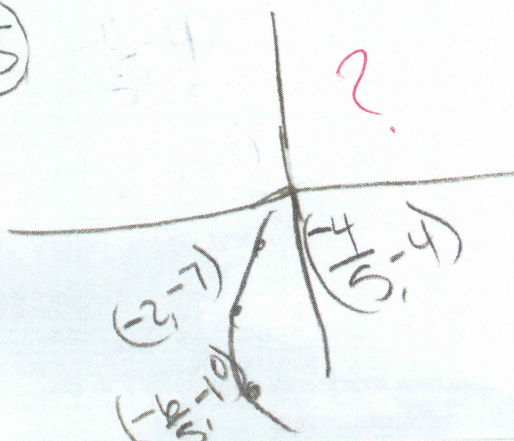
③ $3f(x+5)$



④ $3f(x+5) = 3(x+5)^2$



⑤



Mat 121

wp #2

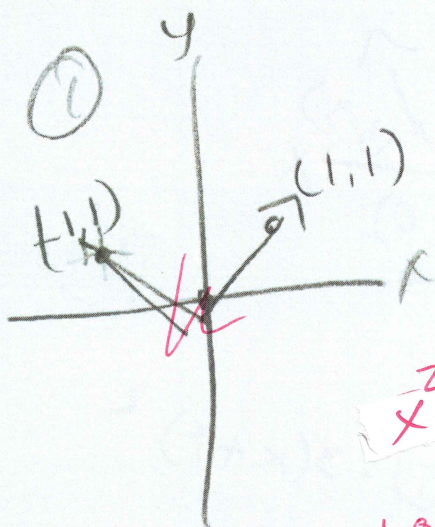
Cacher

⑨ $g(x) = x^2 - 4x - 7$

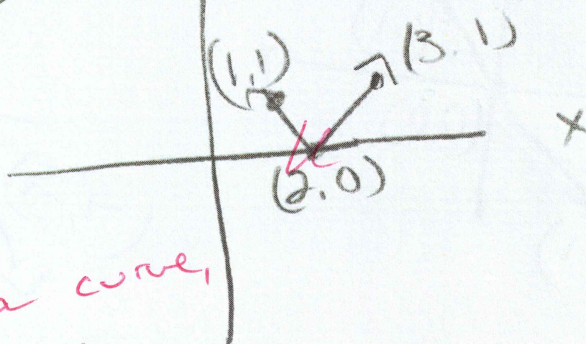
$$= x^2 - 4x + 2^2 - 8 - 7$$

+4 -8 -7 = -11

$$= (x-2)^2 - 11$$

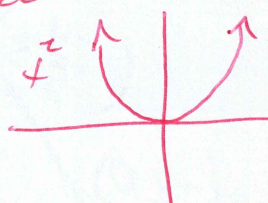


②



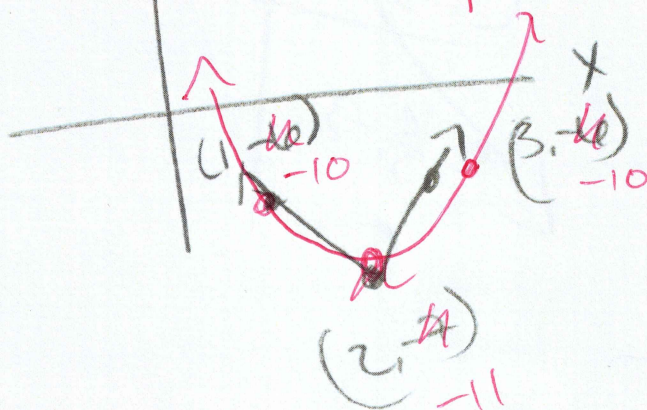
x^2 is a curve,
not a "V".

like this---



$$(x-2)^2 - 11$$

③



Mat 121

WP # 2

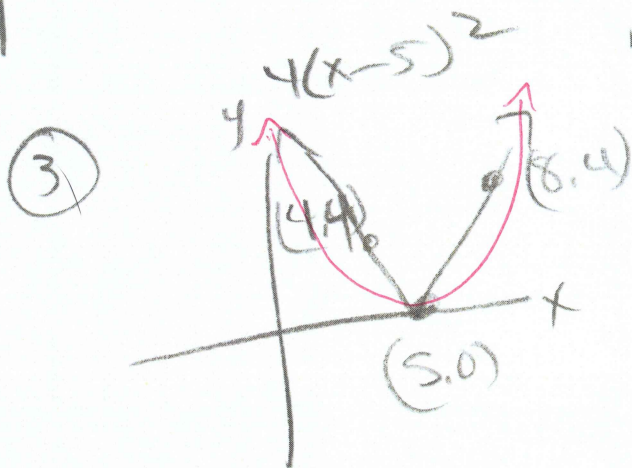
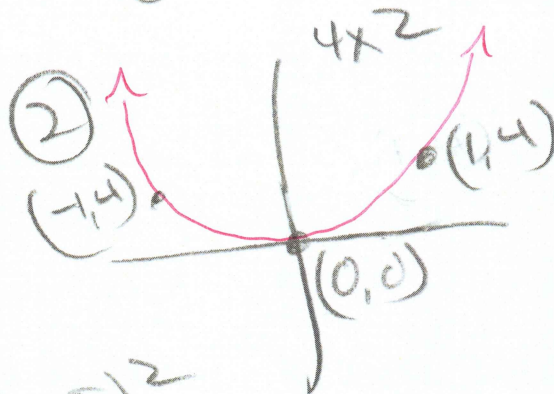
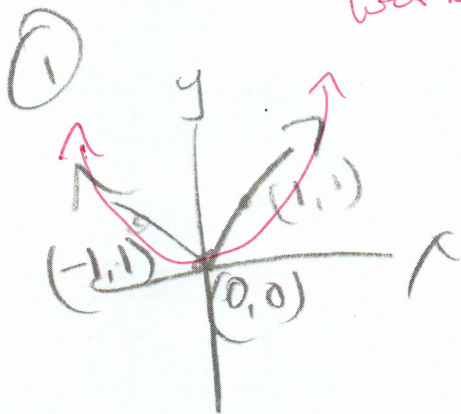
Cacher0

(10) $g(x) = 4x^2 + 5x + 17$

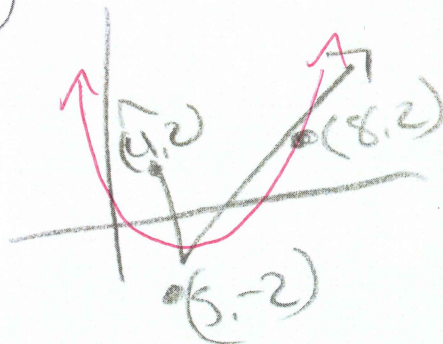
This doesn't work $\rightarrow 4(x^2 - \frac{5}{4}x) + 17$
 $4(x - \frac{5}{4})^2 + 17$
 $4(x - \frac{5}{4})^2 - 2$

Factors out to...

$4(x + \frac{5}{8})^2 + \frac{247}{16}$



④



$g(x) = 4(x-5)^2 - 2$