

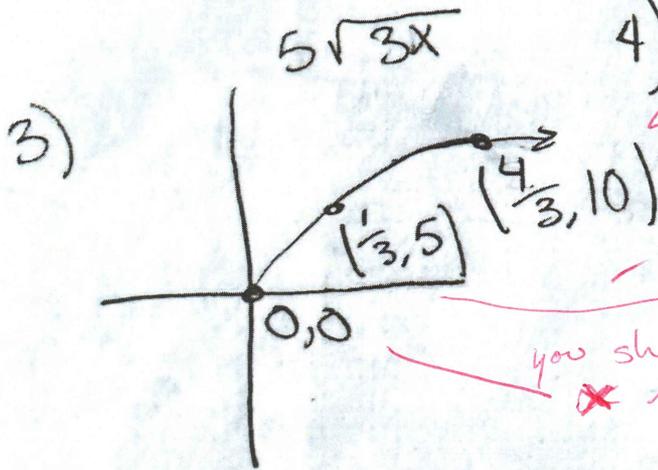
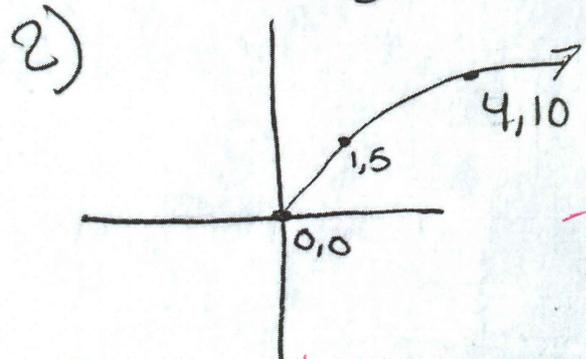
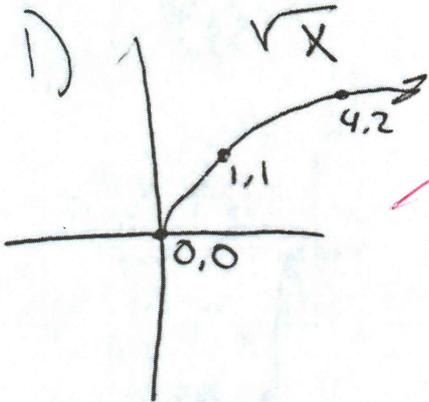
MATH 1340

Isabella Ortiz

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

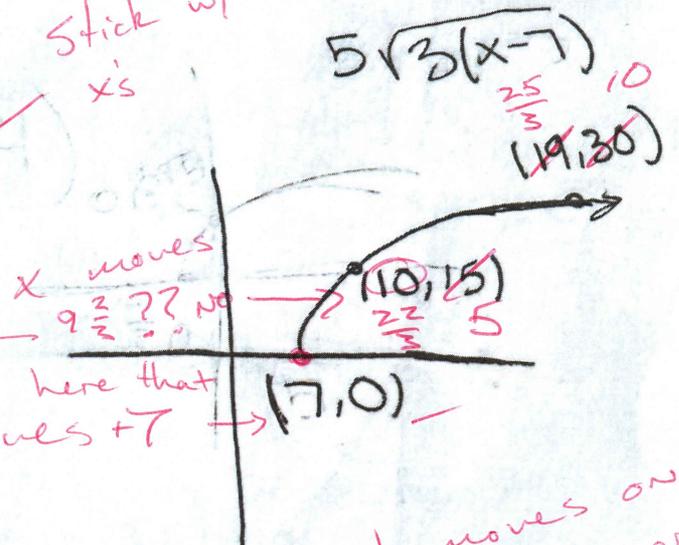
$$= 5\sqrt{3(x-7)}-2$$

36.5
50



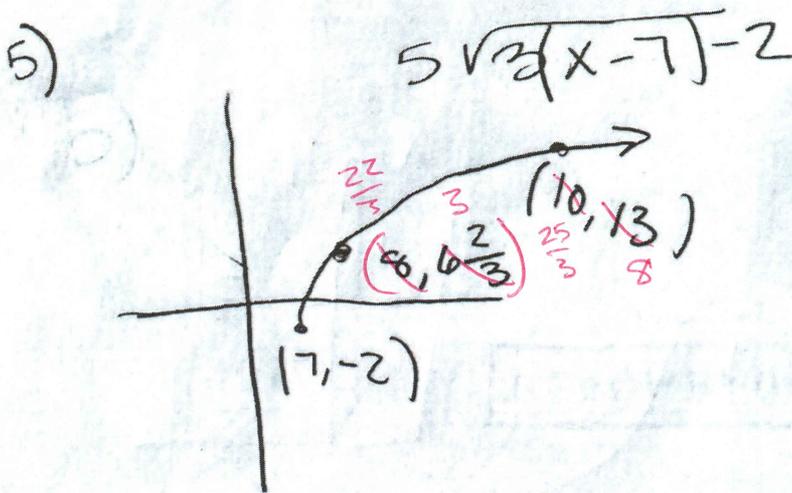
4)

Stick w/ these
x's



x moves
9 2/3 ?? No

you show here that
x moves +7



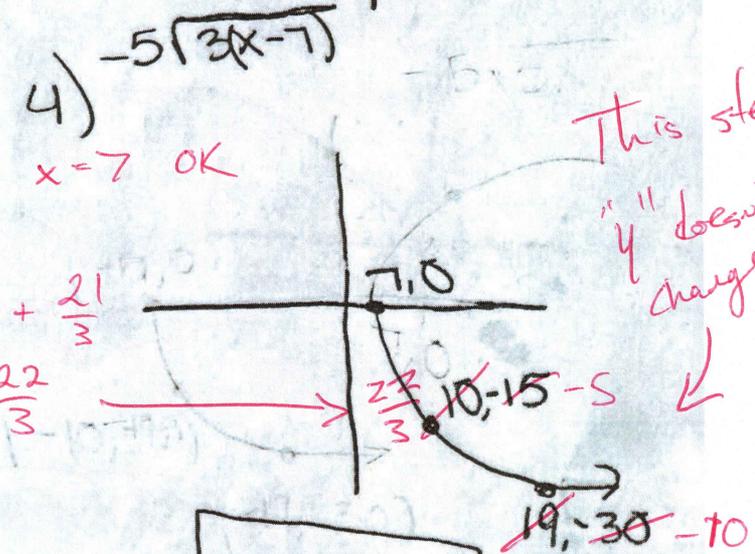
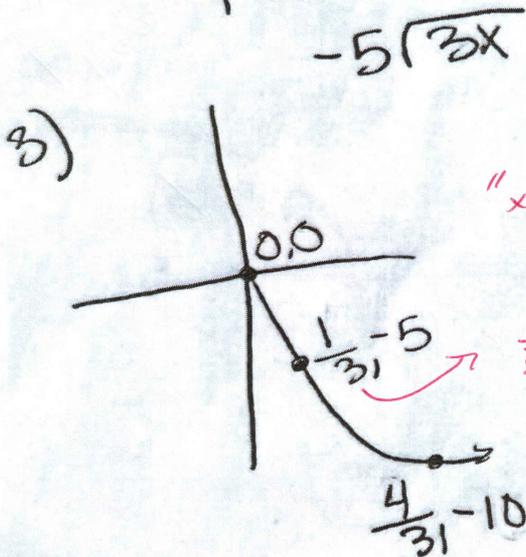
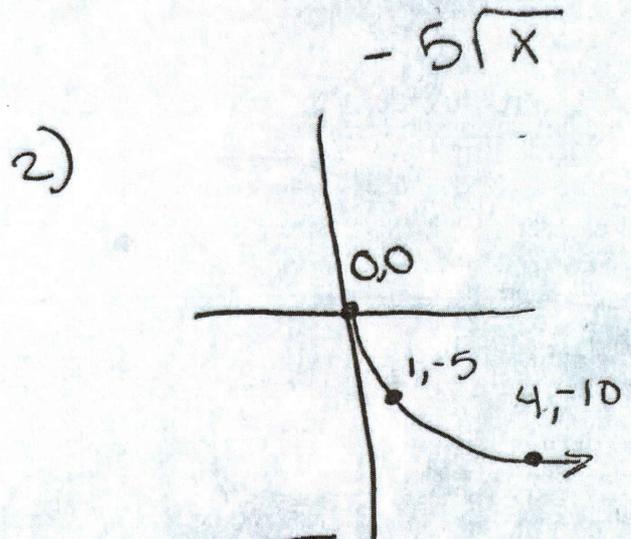
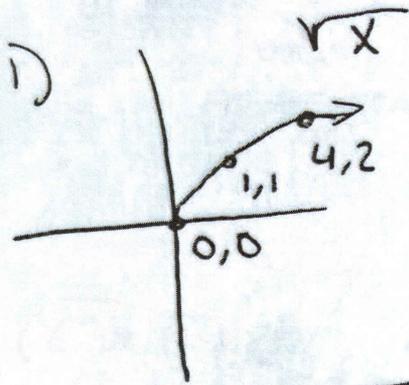
x	4
7	= 2
8	6 2/3
10	13

good moves on
picture! #s were
just off a bit.

+4.5

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



"x-7" \Rightarrow x=7 OK

$\frac{1}{3} + 7 = \frac{1}{3} + \frac{21}{3}$
 $= \frac{22}{3}$

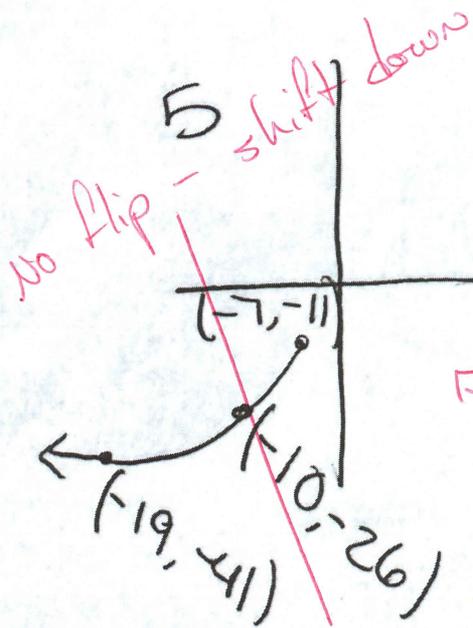
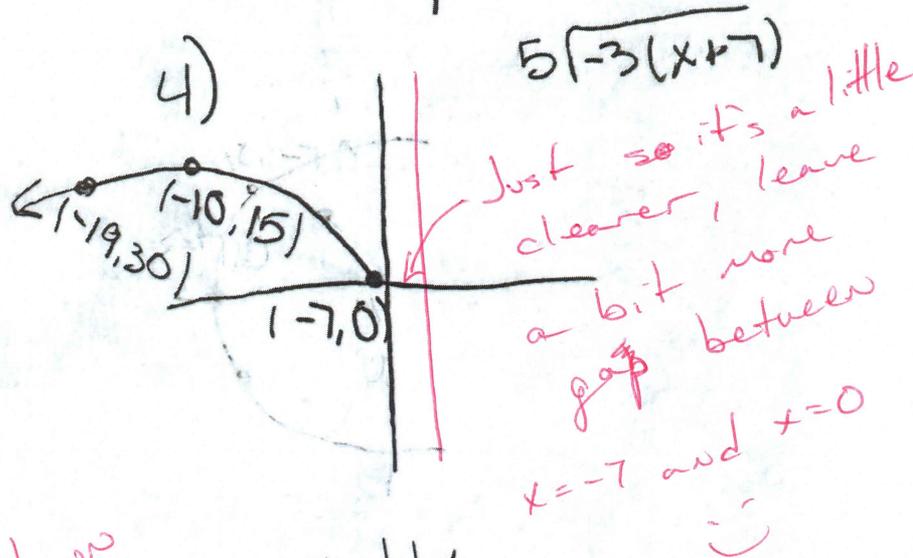
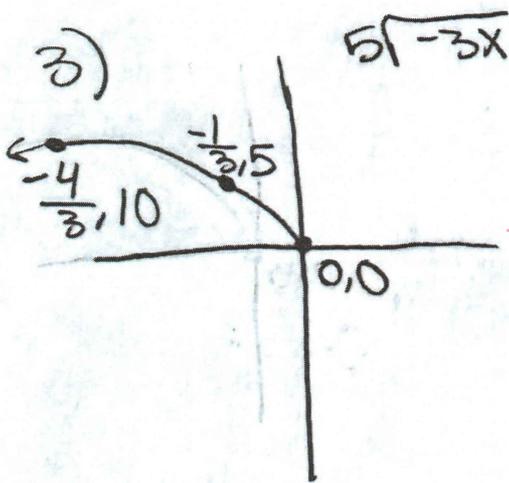
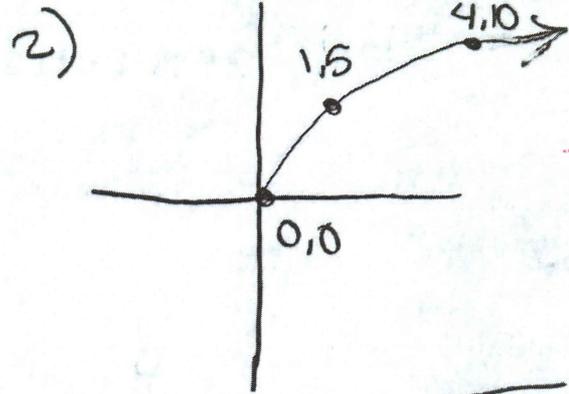
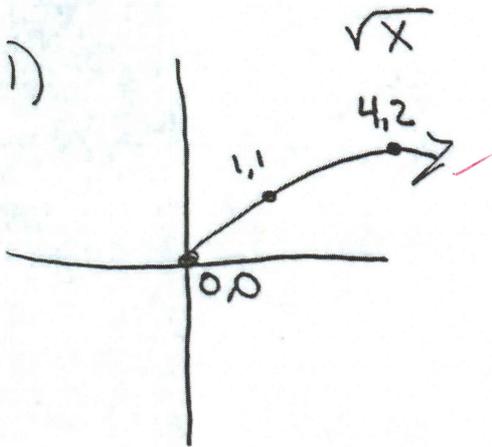
x	y
7	2
8	$-6\frac{2}{3}$
10	-13

5) *If you follow the #'s you start with...*

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

$= 5\sqrt{-3(x+7)}-11$ $5\sqrt{x}$



x	y
-7	-11
-10	-26
-19	-41

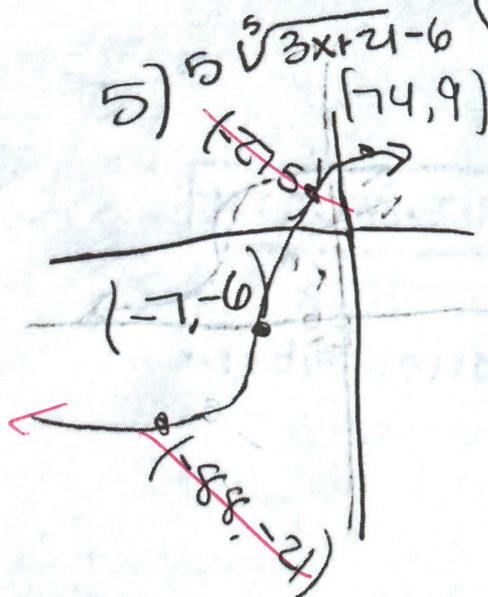
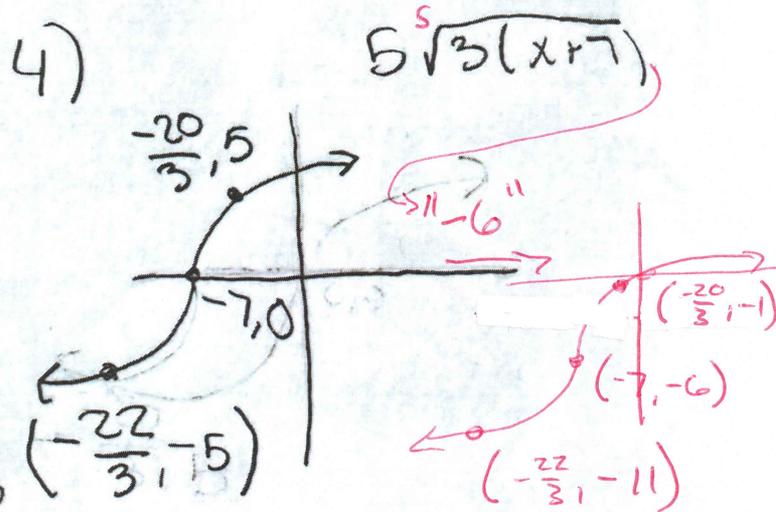
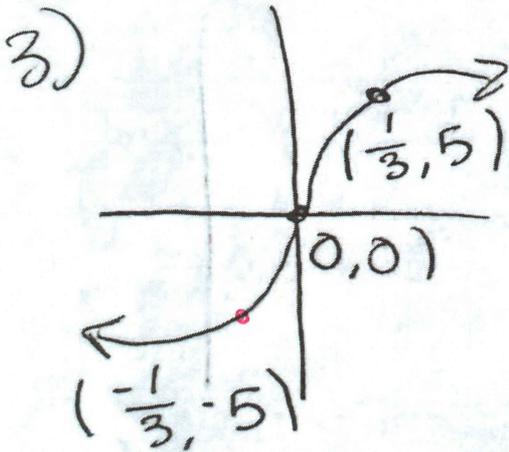
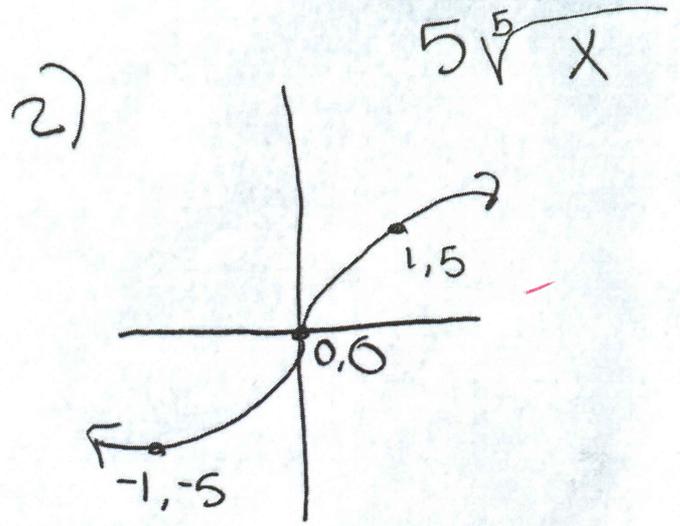
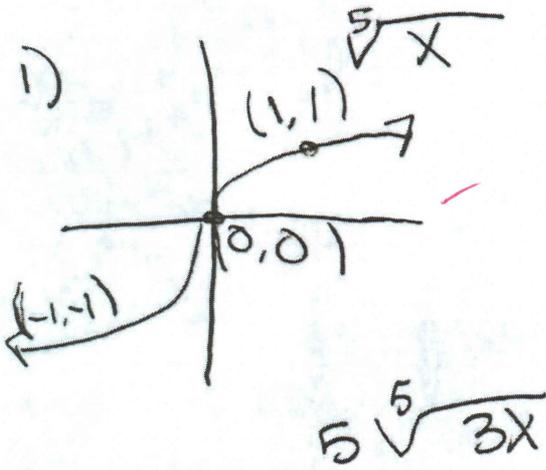
$(-7, -11)$

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$$4) g(x) = \frac{3}{(-2x+8)^3} + 5$$

MATH 1340

$$5) g(x) = 5 \sqrt[5]{3x+21} - 6 = 5 \sqrt[5]{3(x+7)} - 6$$



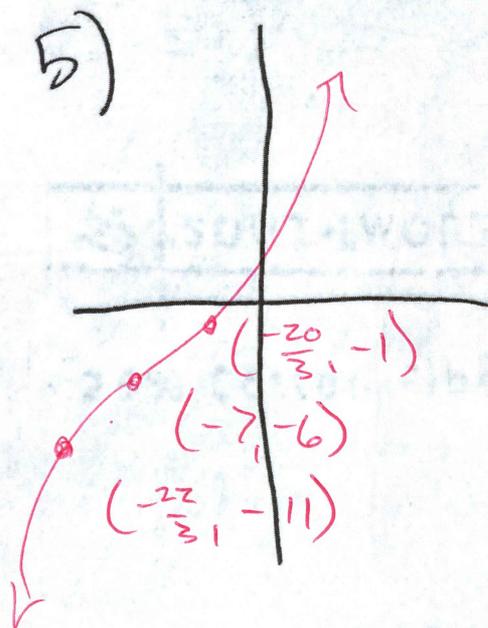
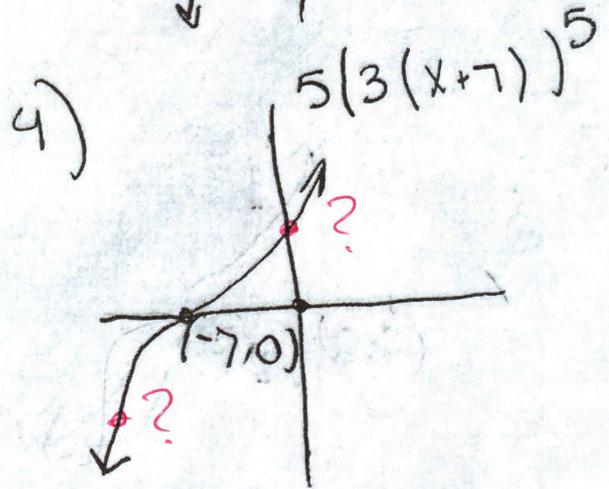
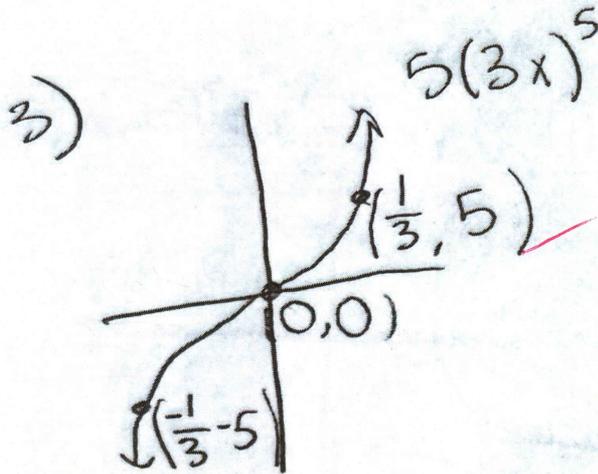
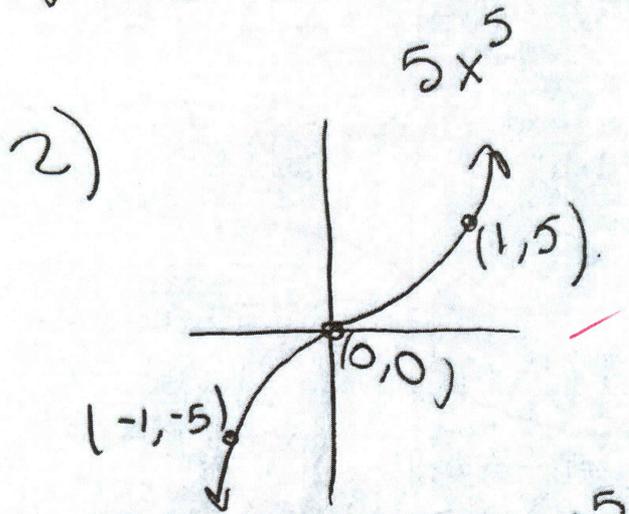
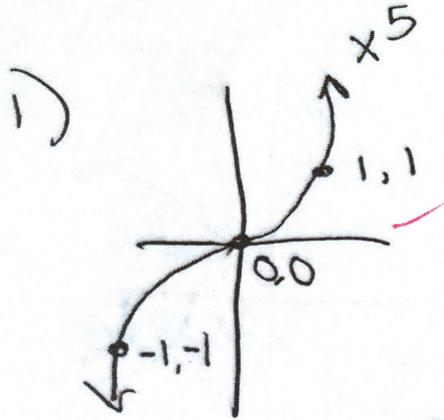
x	y
74	9
-7	-6
-27	5
-88	-21

17/60

↑ why these x values?

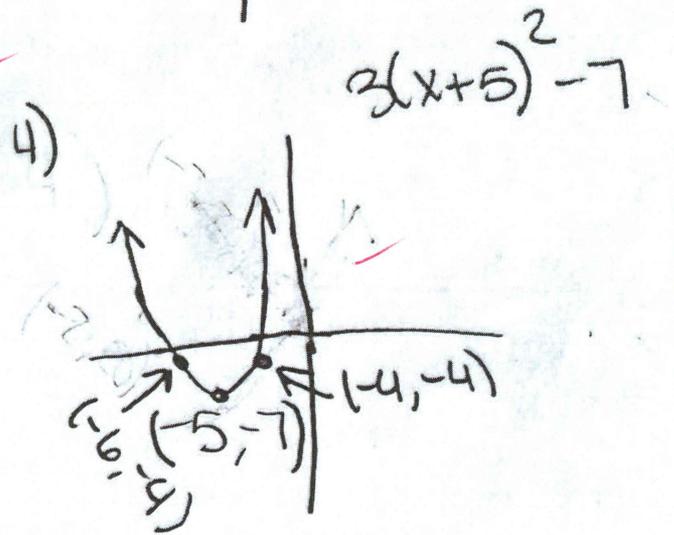
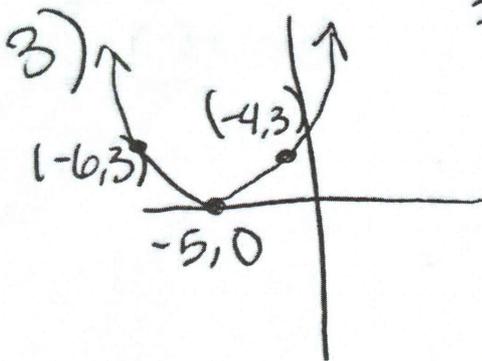
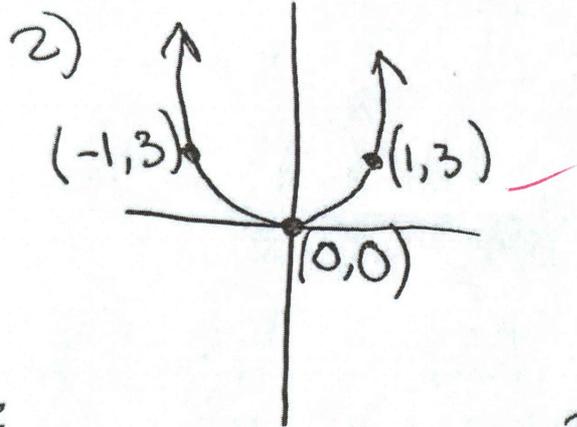
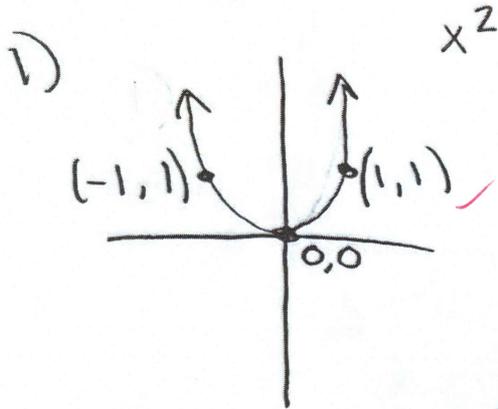
MATH 1340

6) $g(x) = 5(3x+21)^5 - 6$



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

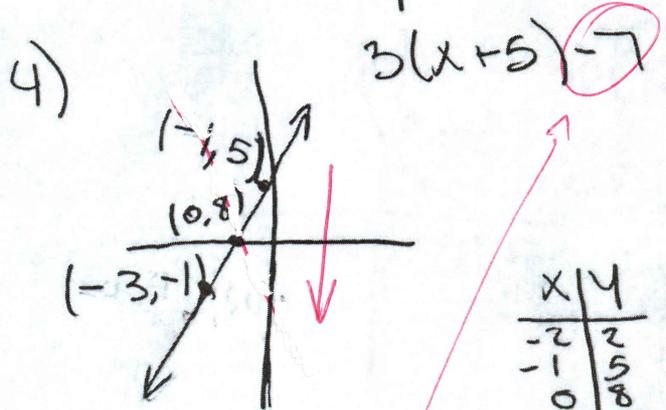
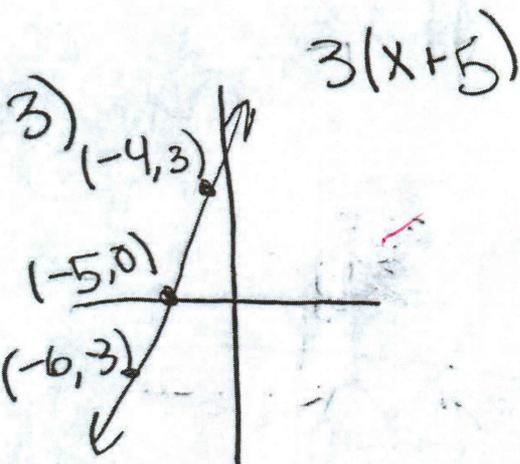
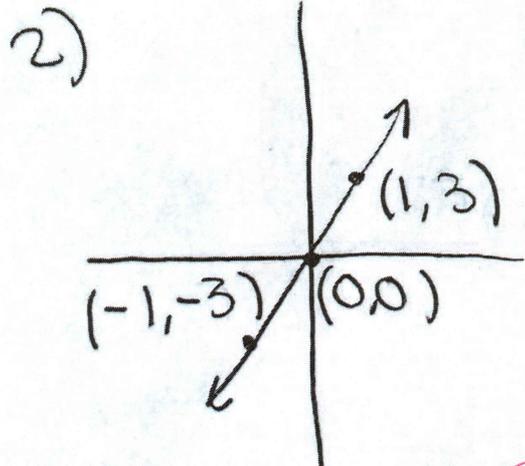
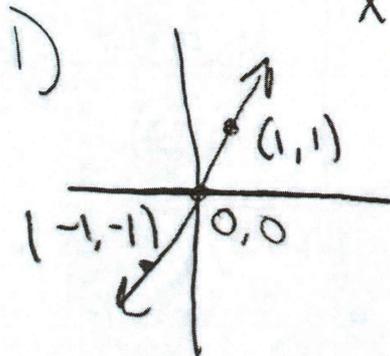


Nice!

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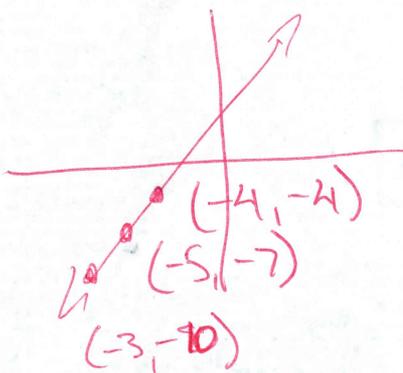
7) $g(x) = 3(x+5) - 7$

$3x$



x	y
-2	2
-1	5
0	8
1	11
2	14

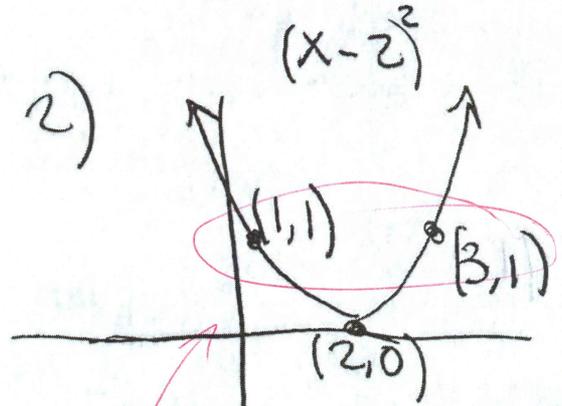
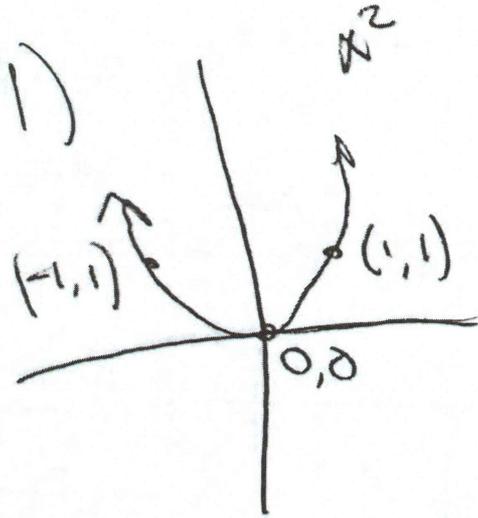
$3(x+5) - 7$ ← shift down 7.



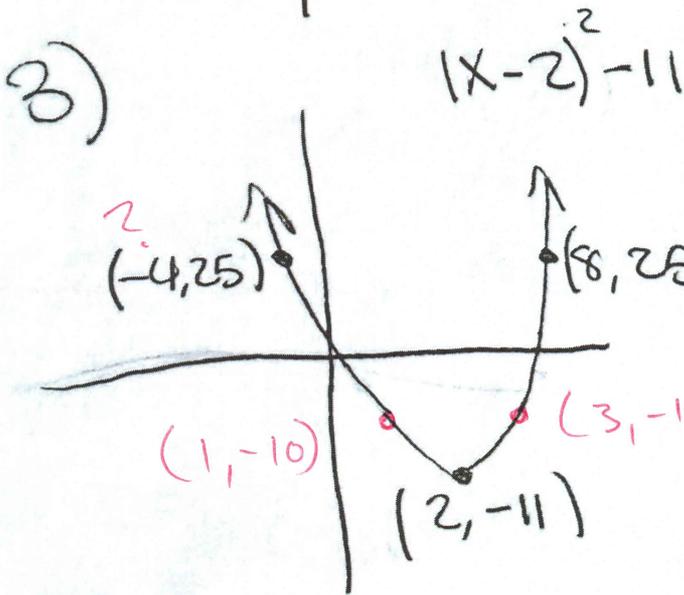
+4

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9) $x^2 - 4x - 7 \rightarrow$ show how
 $= (x-2)^2 - 11 \leftarrow$



Keep these points when you shift



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

$$g(x) = 4\left(x^2 + \frac{5}{4}x\right) + 17$$

$$+ \left(4 \cdot \frac{25}{64}\right) + \frac{25}{64}$$

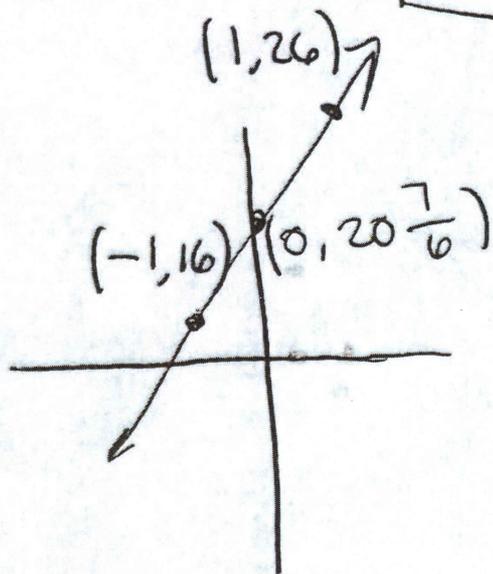
$$g(x) + \frac{4}{1} \times \frac{25}{64} = 4\left(x^2 + \frac{5}{4}x + \frac{25}{64}\right) + 17$$

$$g(x) + \frac{25}{16} = 4\left(x + \frac{5}{8}\right)^2 + 17$$

$$- \frac{25}{16} \qquad - \frac{25}{16}$$

$$\begin{array}{r|l} -1 & 16 \\ 0 & 20\frac{7}{16} \\ 1 & 26 \end{array}$$

$$g(x) = 4\left(x + \frac{5}{8}\right)^2 + \frac{247}{16} \quad \text{Nice!}$$



Start @ x^2