

MAT 1340 ²⁵/₅₀ WP #2

Set A Bravy

① $g(x) = 5\sqrt{3x-21}$
 $3(x-7)-2$

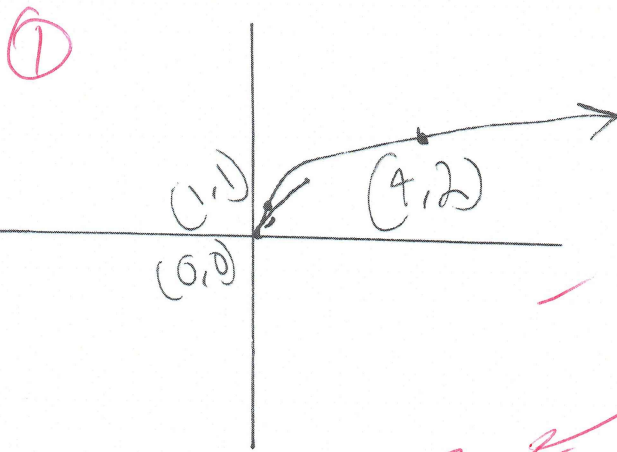
-2

outside the radical

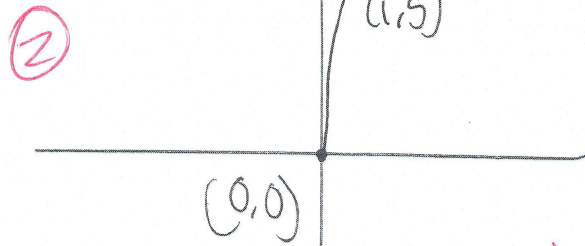
Confusing layout here...
 (5)

(10,13) got it! :)

(A) $\sqrt{x}$

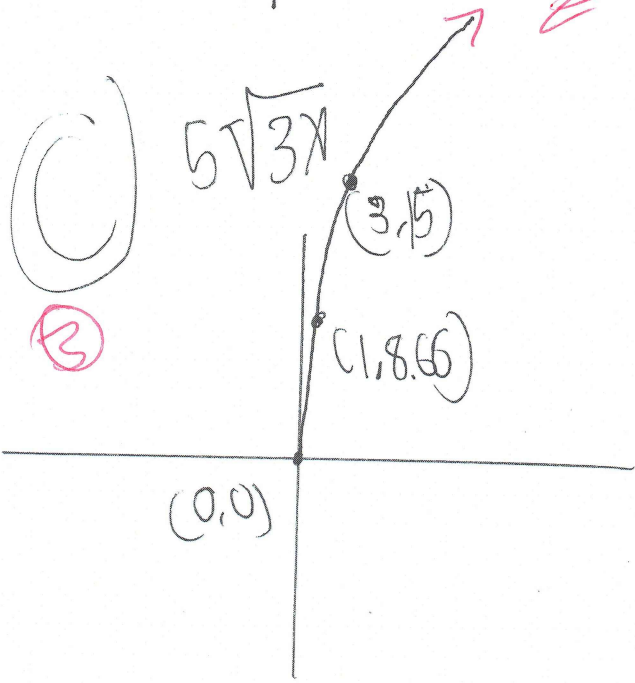


(B) $5\sqrt{x}$



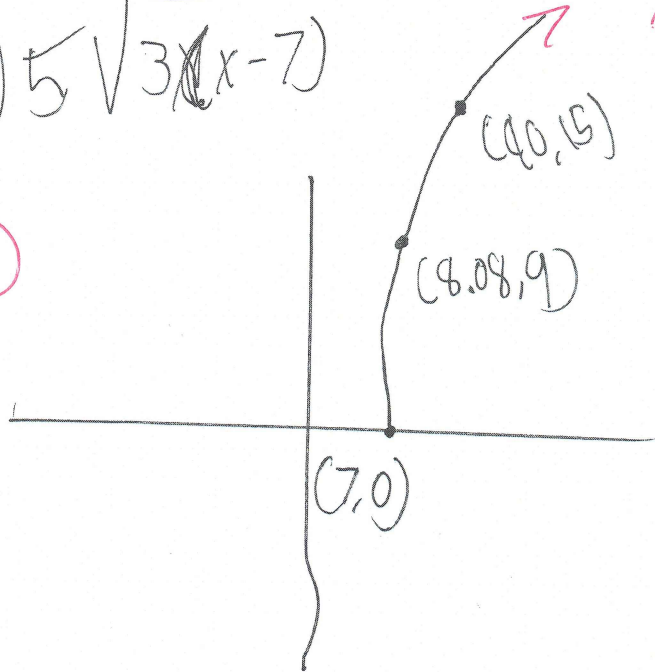
Show that it keeps going

(C) $5\sqrt{3x}$



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

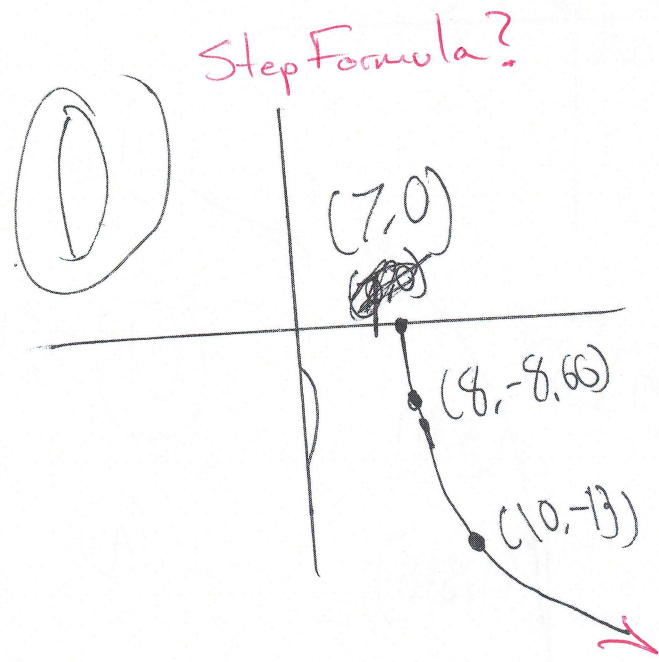
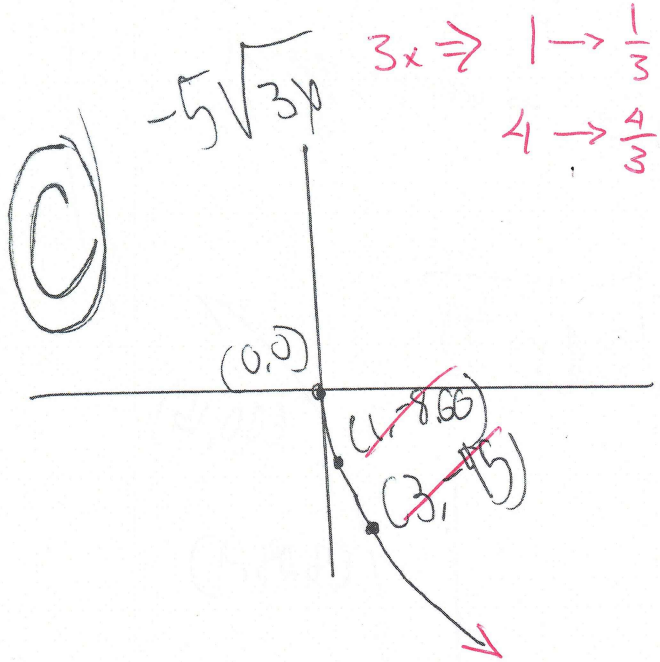
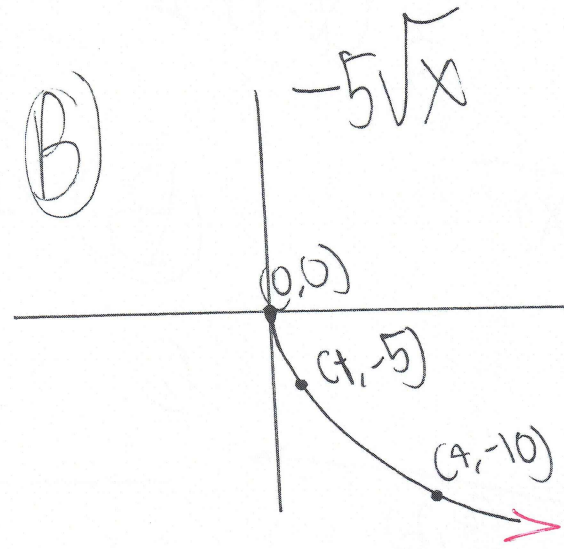
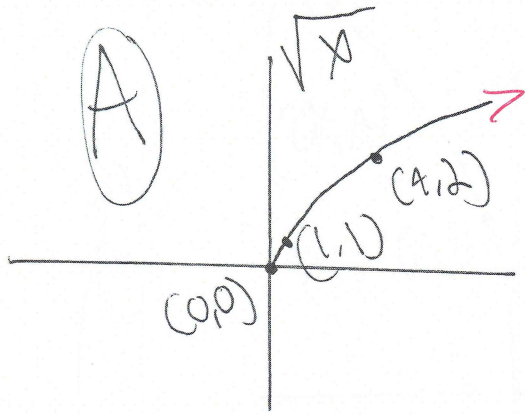
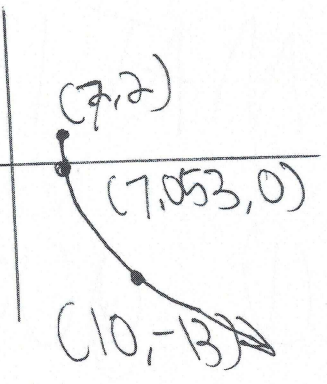
④



+4.5

MAT 1940

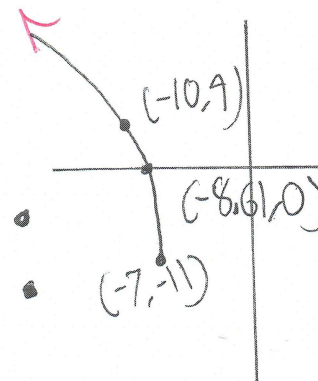
② $g(x) = -5\sqrt{3x-2} + 2$
 $3(x-1) + 2$



why?

MAT 1340

③ $g(x) = 5\sqrt{-3x-21-11}$
 $-3(x+7)-11$

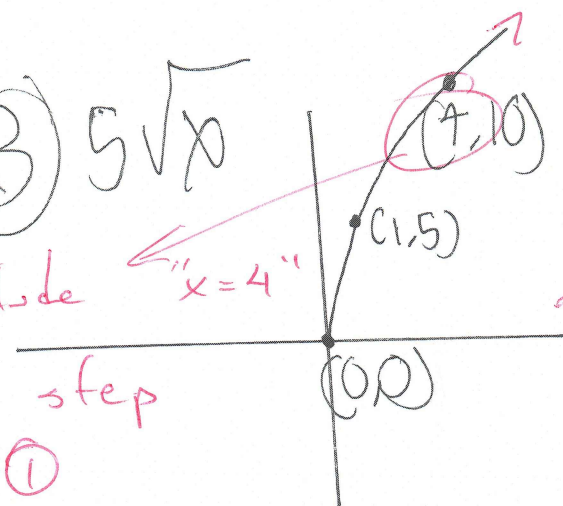


For real,
 Put this
 at the
 bottom
 please.

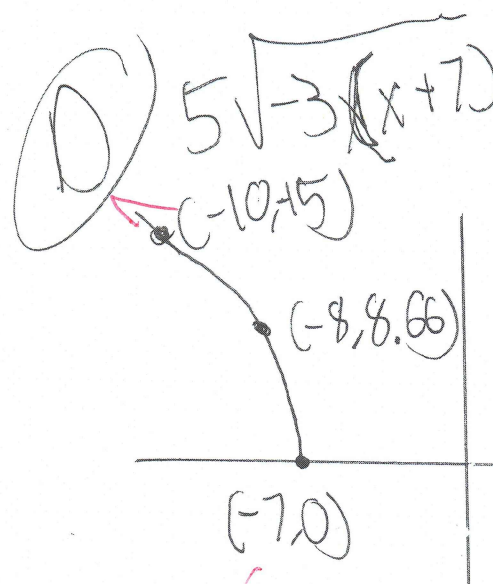
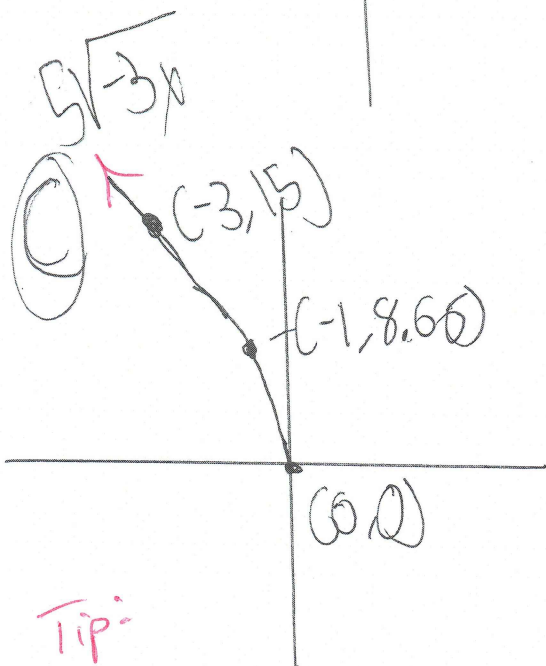
Ⓐ $\sqrt{x}$



Ⓑ $5\sqrt{x}$



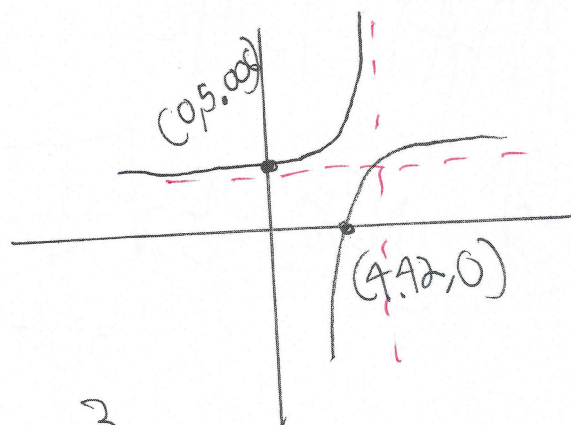
Include "x=4"
 in step
 ①



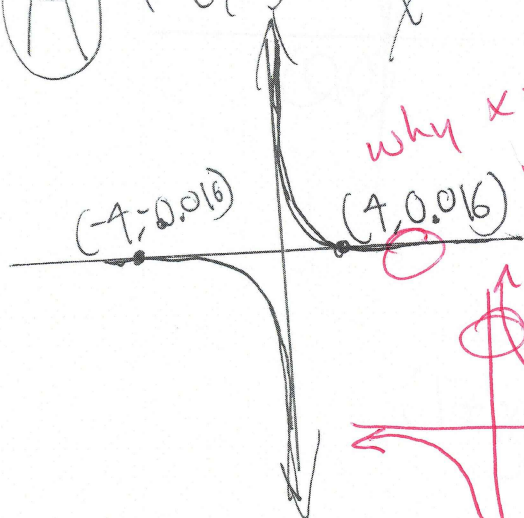
Tip:
 "-3x" only changes
 the "x", does not
 change values for
 your "y"s.

MAT 1340

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

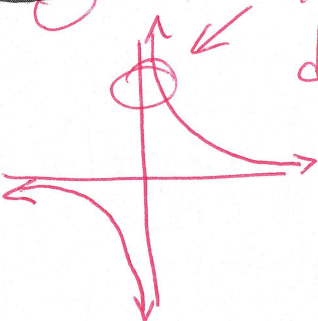


A $f(x) = \frac{1}{x^3}$



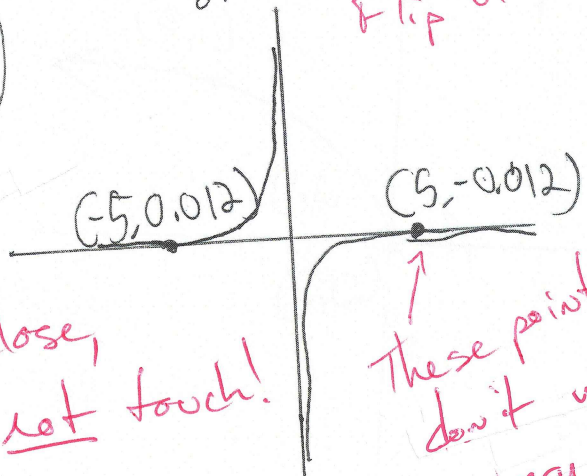
why $x = \pm 4$?

Gets close, does not touch!



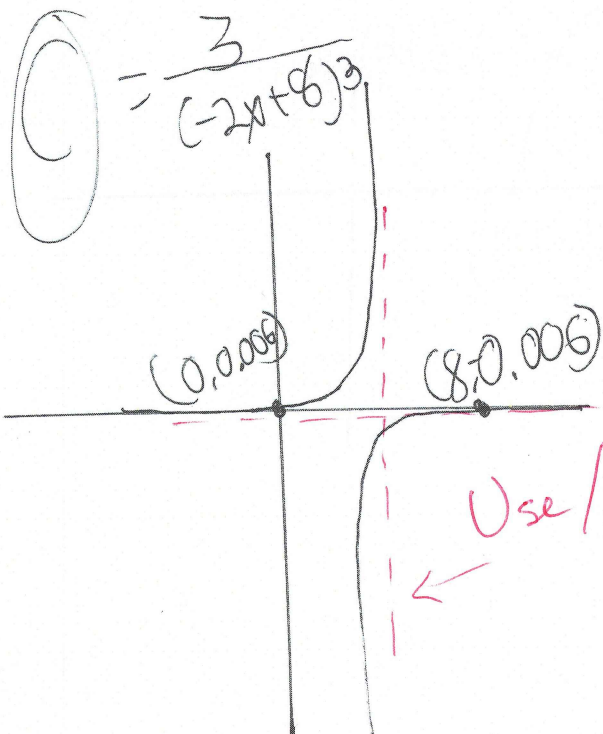
B

$f(x) = \frac{3}{-2x^2}$

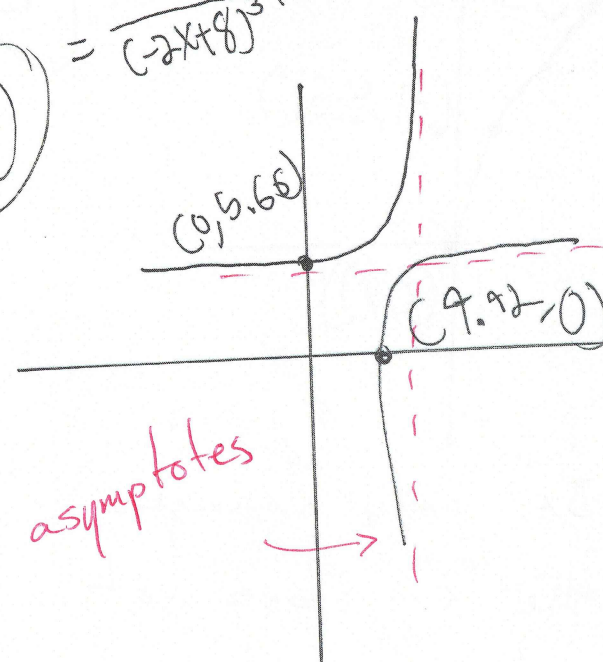


Flip OK

These points don't work very well...



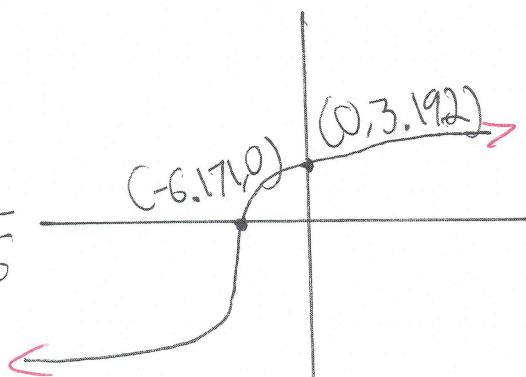
D $= \frac{3}{(-2x+8)^3} + 5$



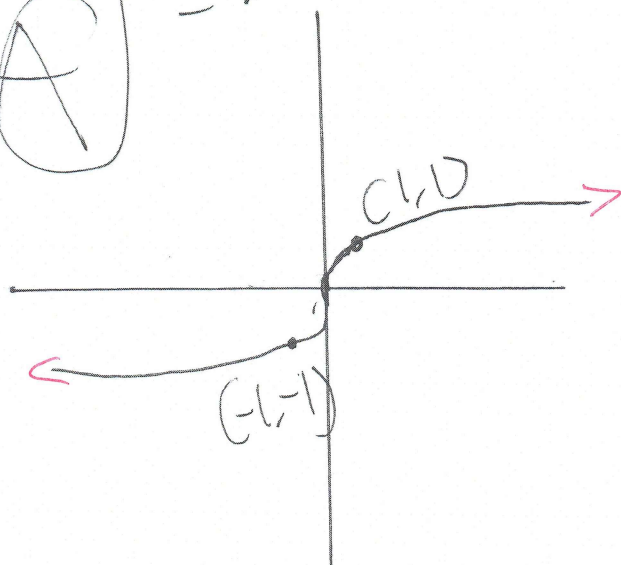
Use/draw asymptotes

MAT 1340

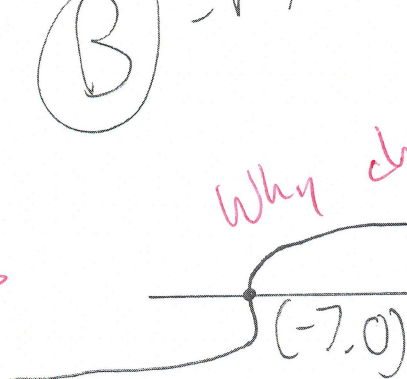
(5) $g(x) = 5\sqrt[5]{3x+21} - 6$



(A) $= \sqrt[5]{x}$

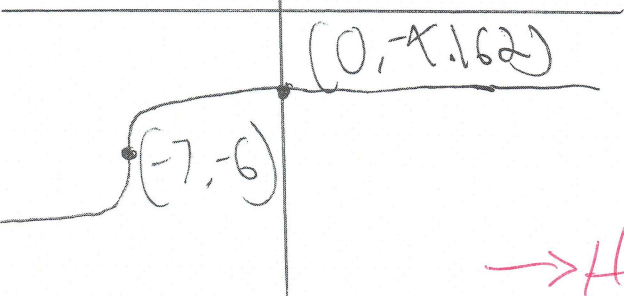


(B) $= \sqrt[5]{3x+21}$

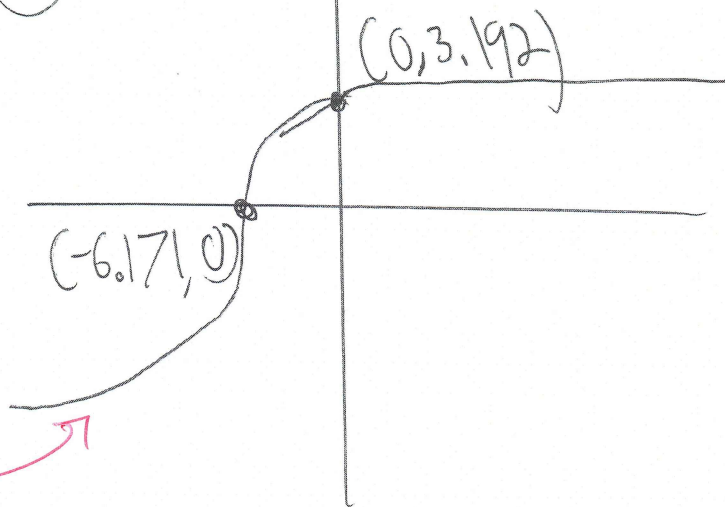


Why change to intercepts?
 Don't! Transform the points from step ①

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



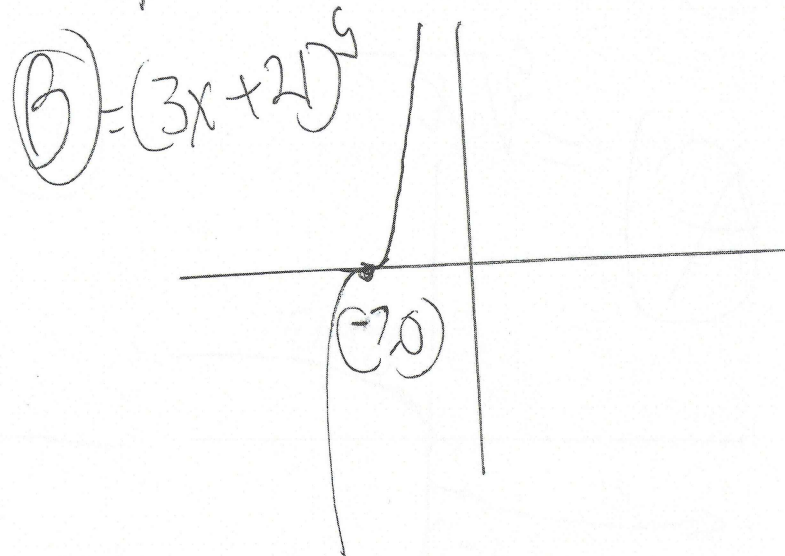
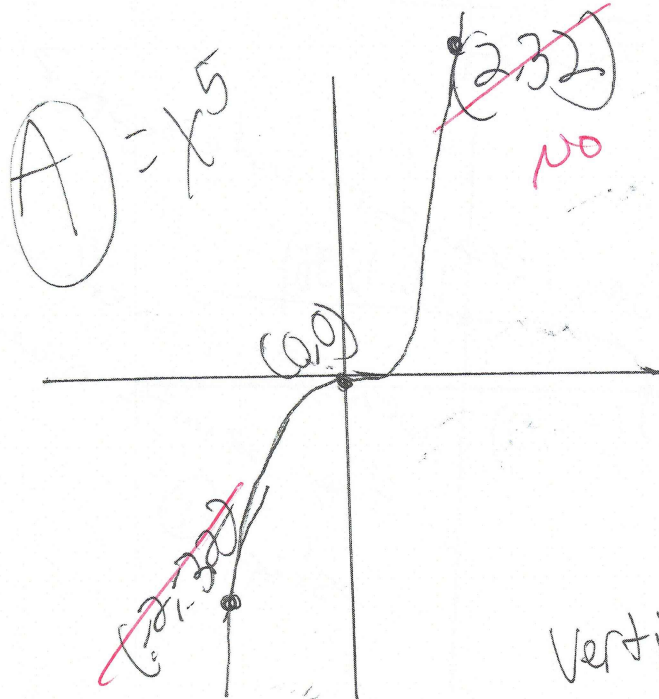
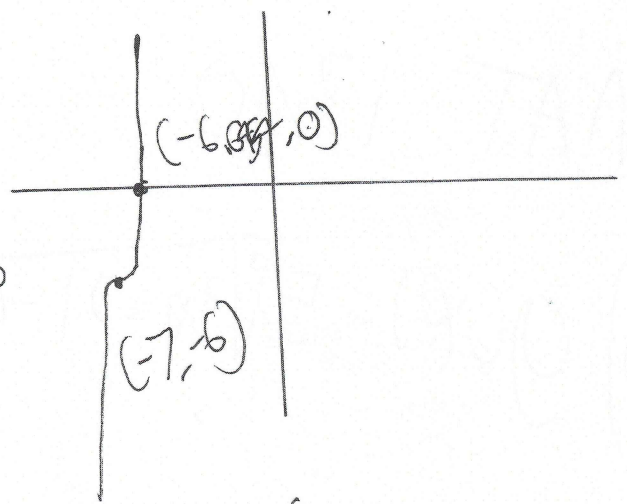
(D) $= 5\sqrt[5]{3x+21} - 6$



→ How?

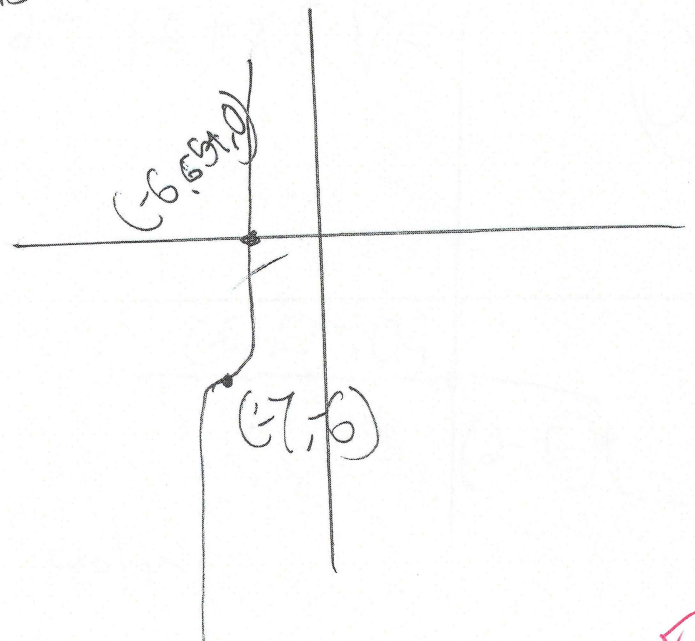
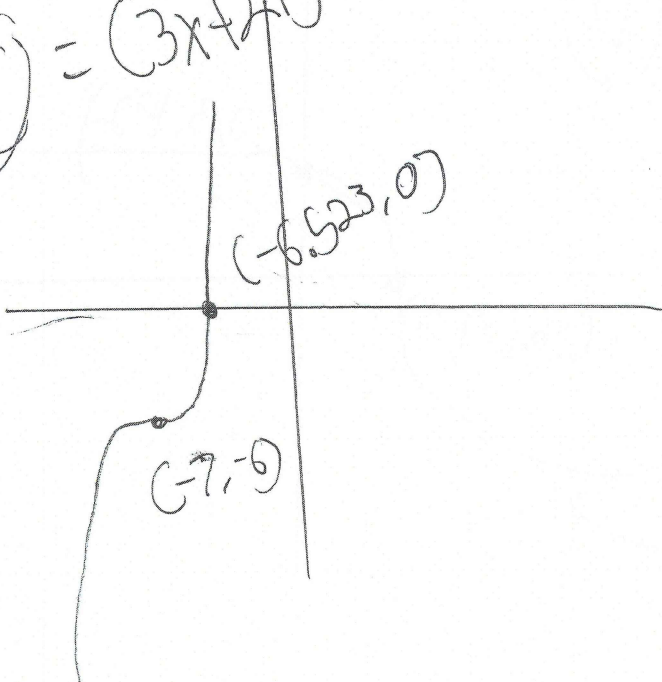
MAT 1340

6) $g(x) = 5(3x+2)^5 - 6$



Vertical stretch

C) $(3x+2)^5 - 6 \rightarrow D = 5\sqrt[5]{3x+2} - 6$

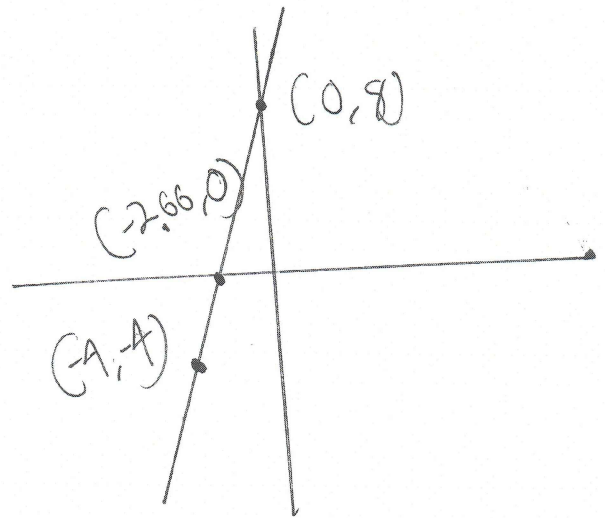


+1.5

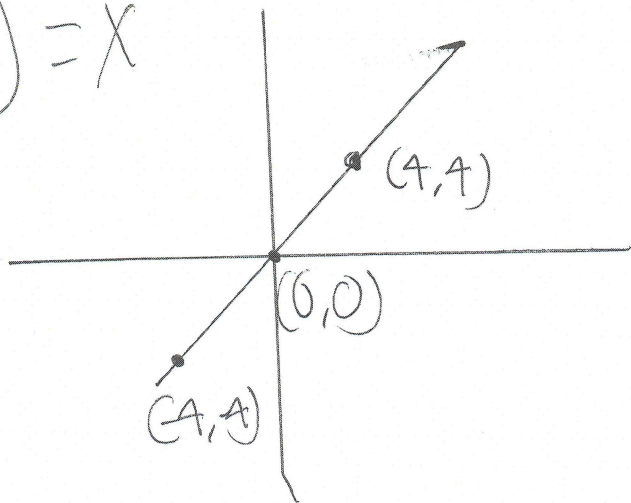
MAT 1340

⑦ $g(x) = 3(x+5) - 1$

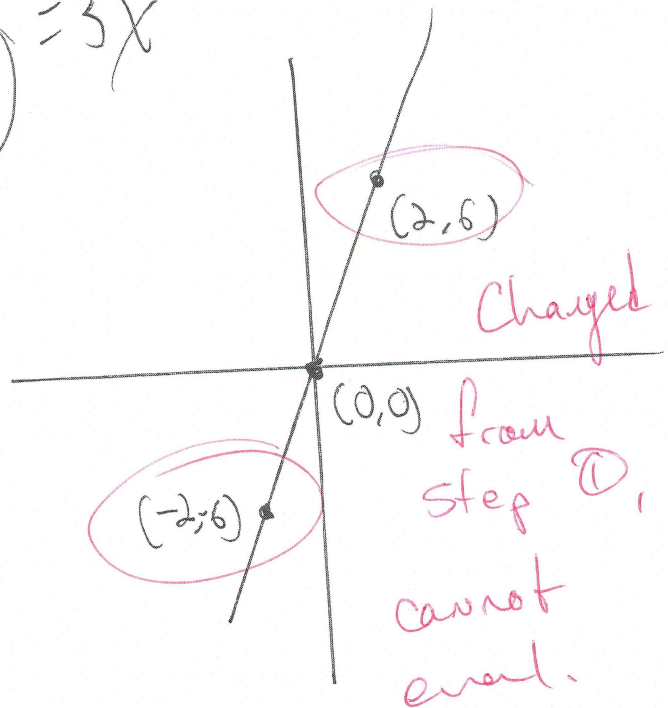
$\downarrow$
 $(3x+8)$



① $A = x$

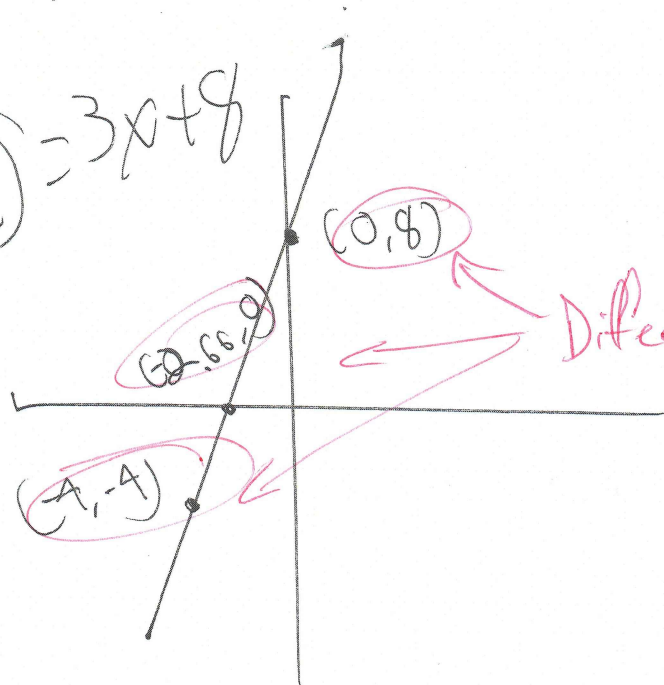


③ $= 3x$



Changed from step ①, cannot eval.

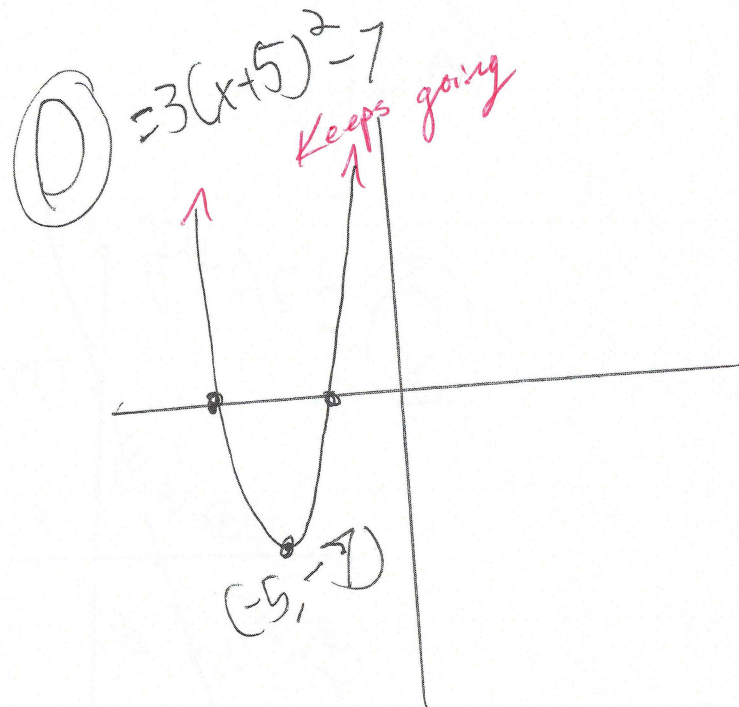
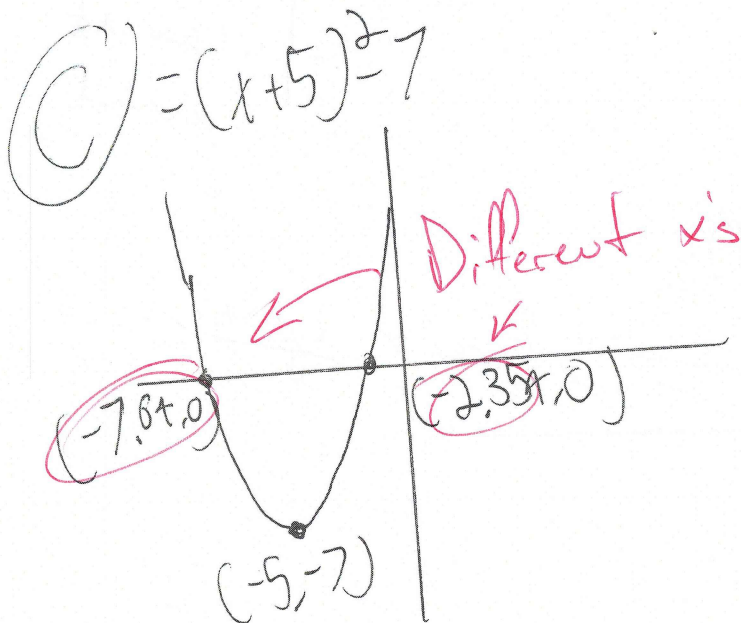
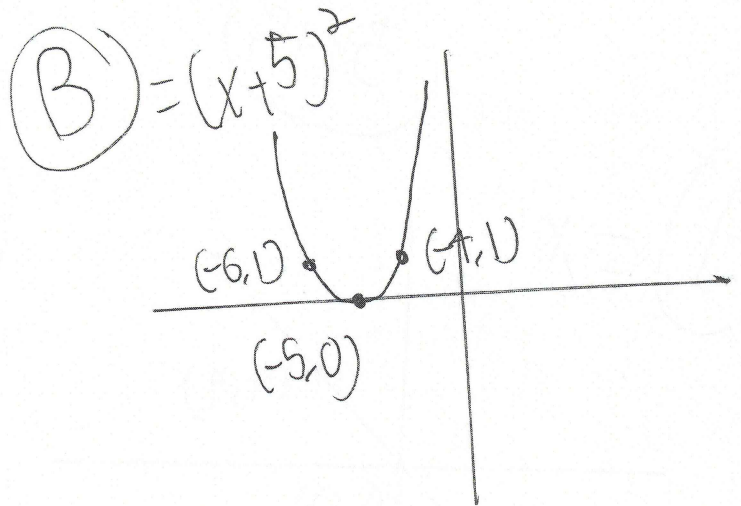
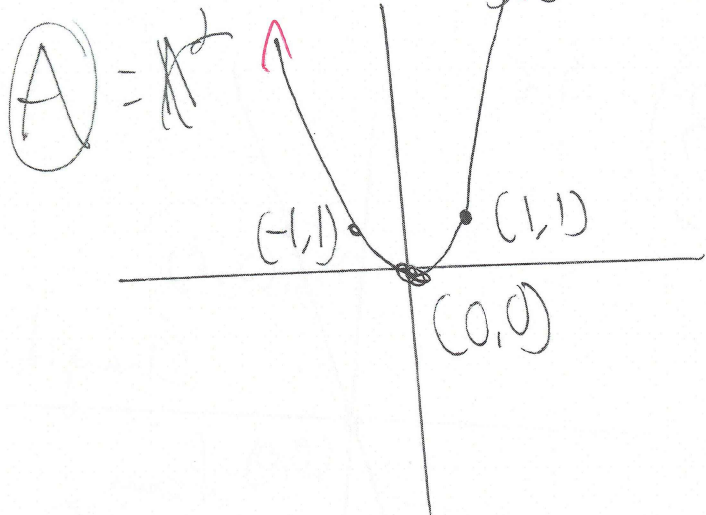
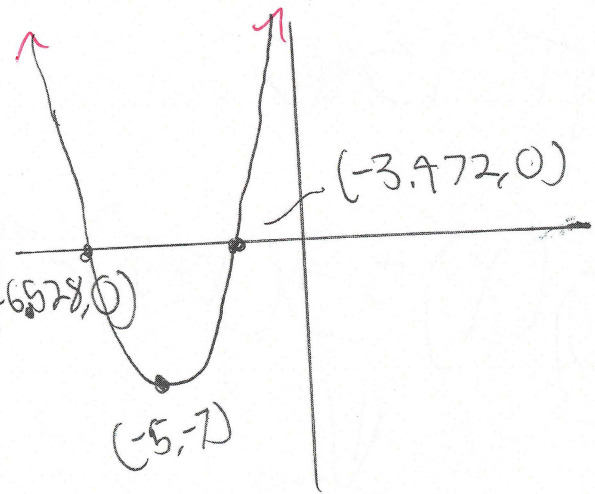
② $= 3x + 8$



Different again.

MAT 1340

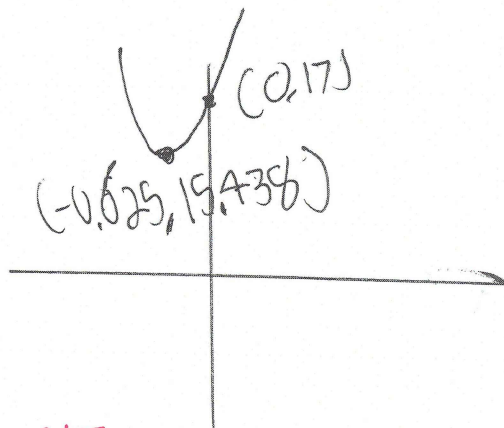
⑧ $g(x) = 3(x+5)^2 - 7$



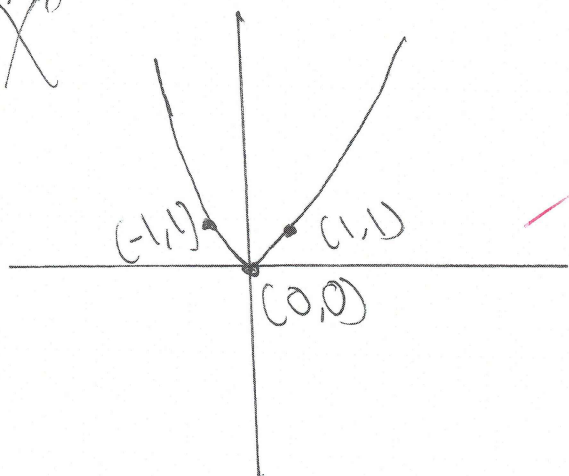
MAT 1340

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

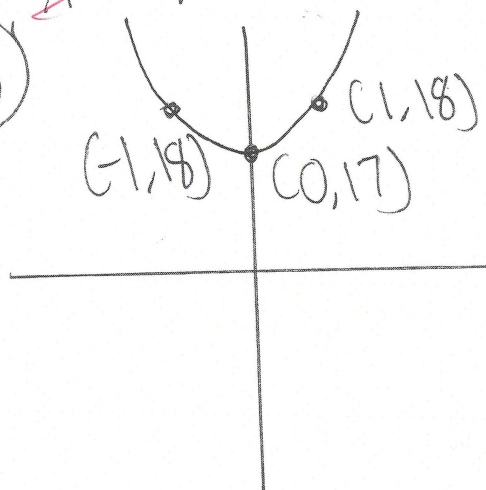
works to... $4(x + \frac{5}{8})^2 + \frac{247}{16}$



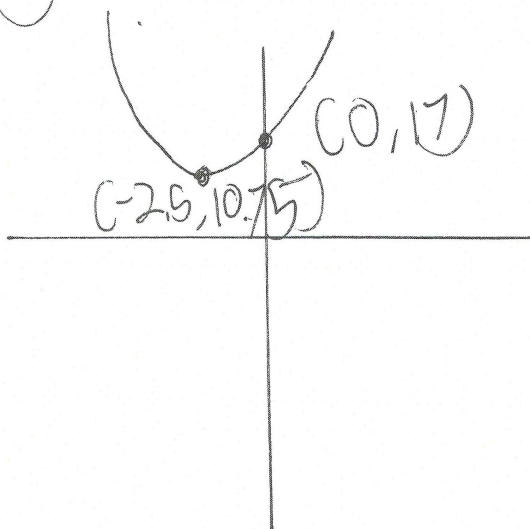
(A) x^2



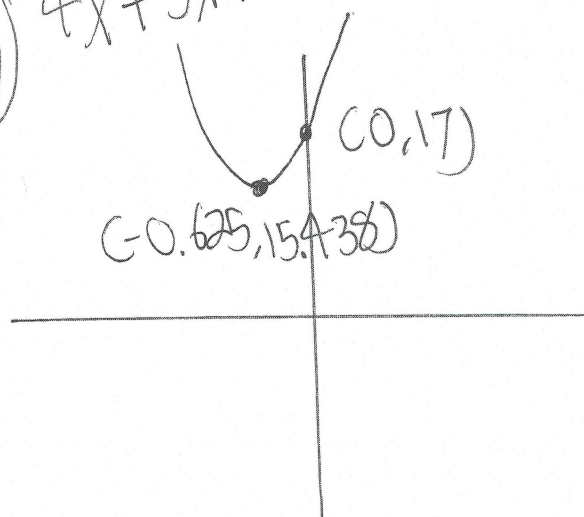
(B) $x^2 + 17$



(C) $x^2 + 5x + 17$



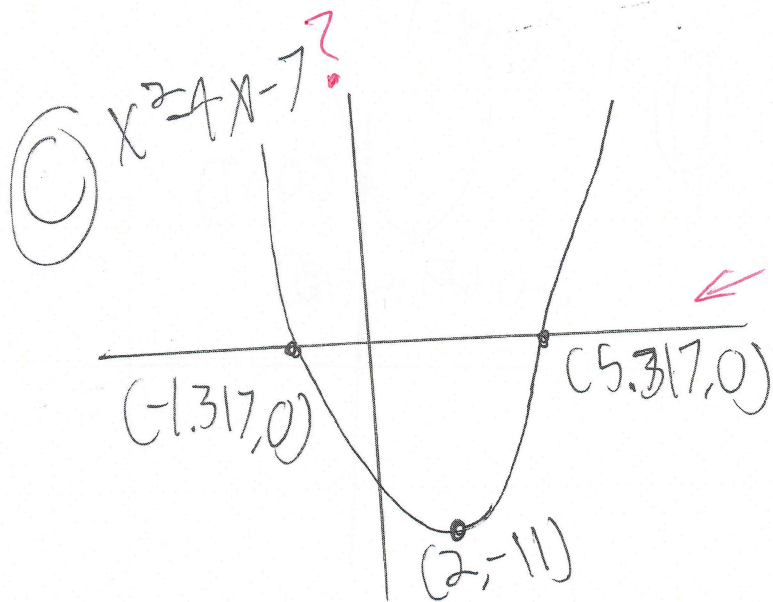
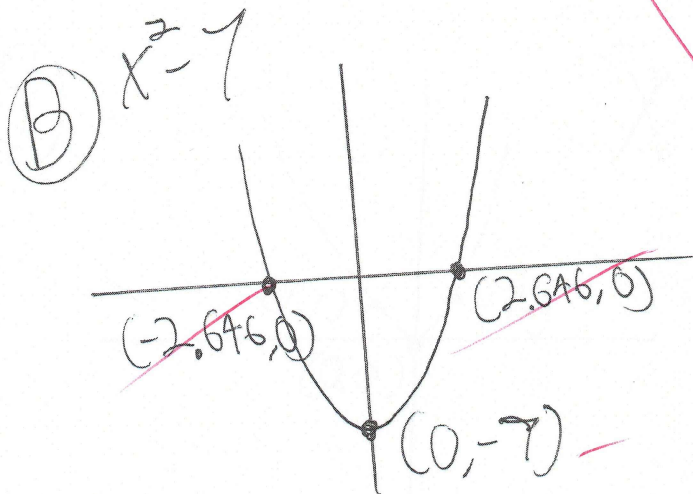
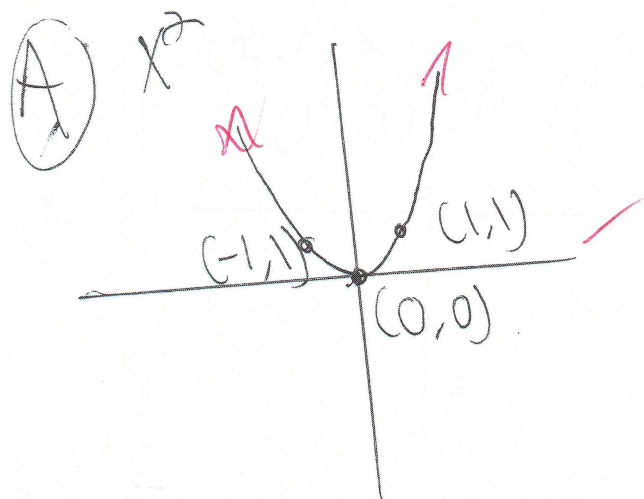
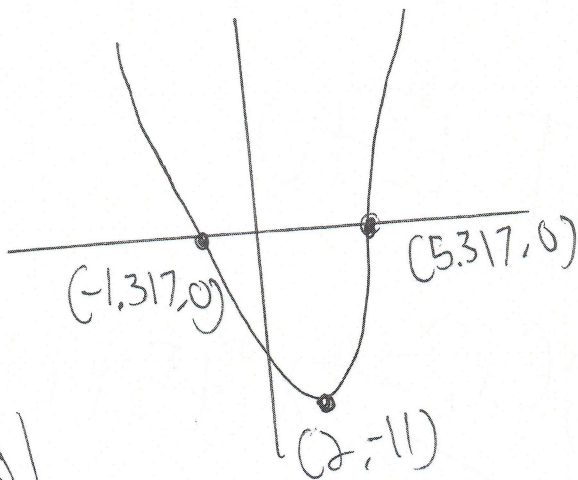
(D) $4x^2 + 5x + 17$



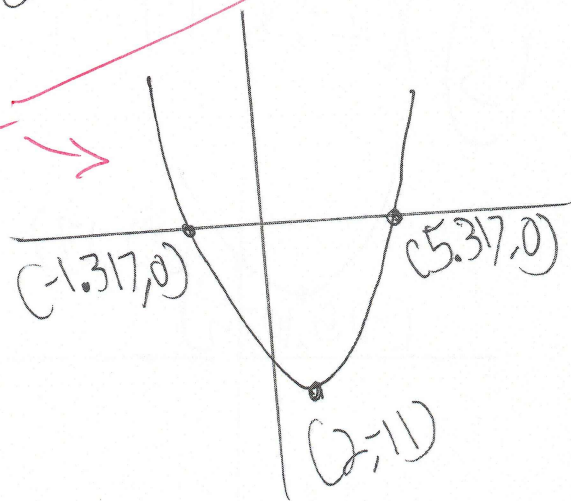
+ 1.5

MAT 1340

(9) $g(x) = x^2 - 4x - 7$
 $(x-2)^2 - 7 - (-2)^2$
 $(x-2)^2 - 11$



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



same

+2