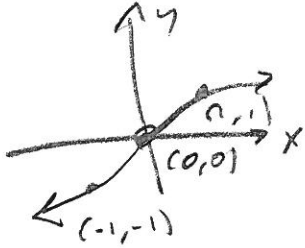


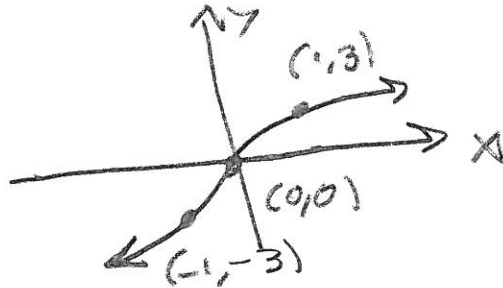
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①  $g(x) = 3\sqrt[3]{5x+2} + 7$

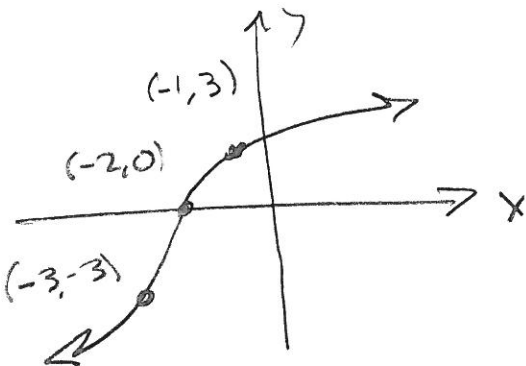
②  $f(x) = \sqrt[3]{x}$



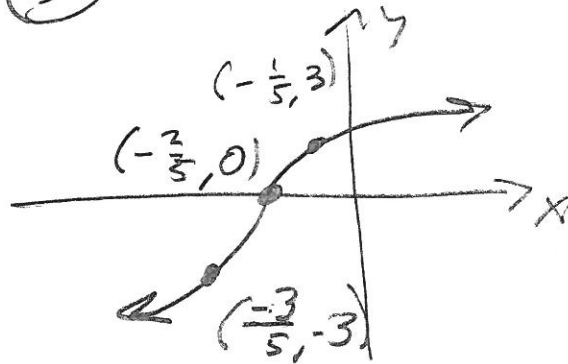
③  $3\sqrt[3]{x} = 3f(x)$



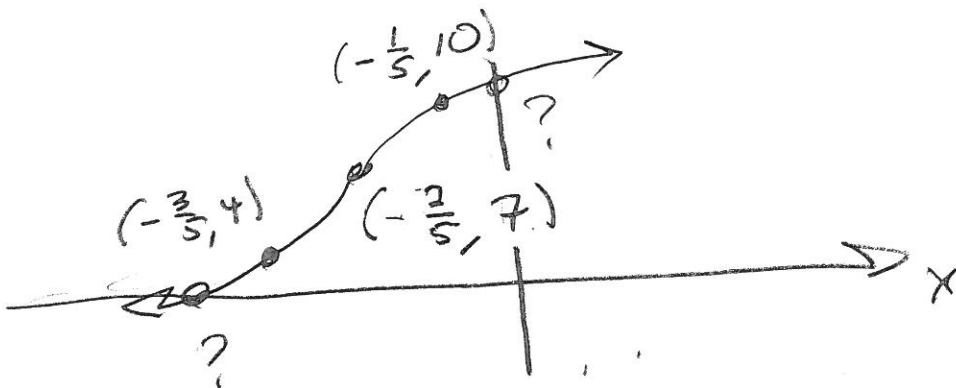
④  $3f(x+2) = 3\sqrt[3]{x+2}$



⑤  $3f(5x+2) = 3\sqrt[3]{5x+2}$



⑥  $3f(5x+2) + 7 = g(x) = 3\sqrt[3]{5x+2} + 7$

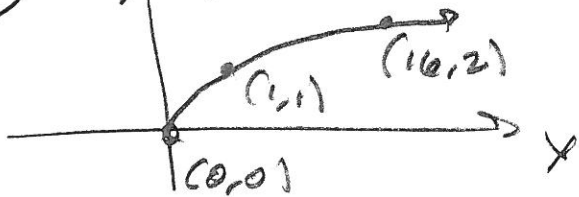


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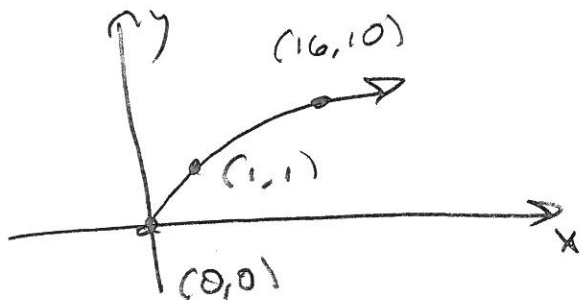
WP #2

$$(2) \quad g(x) = 5(7x+21)^{\frac{1}{4}} - 13 = 5\sqrt[4]{7x+21} - 13$$

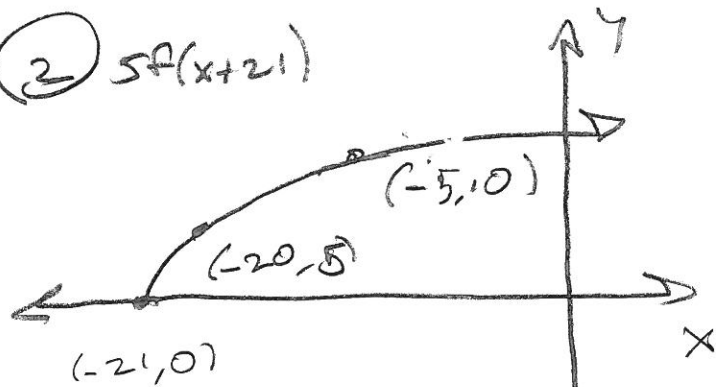
$$(0) \quad f(x) = x^{\frac{1}{4}} = \sqrt[4]{x}$$



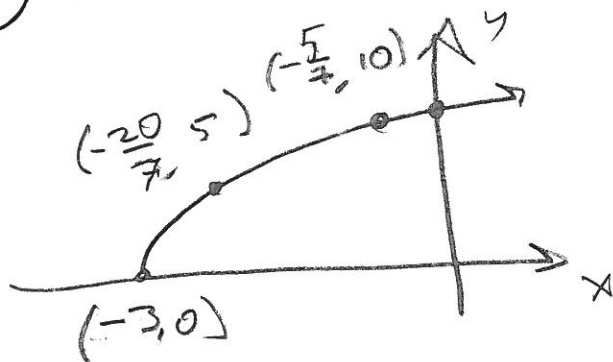
$$(1) \quad 5f(x) = 5x^{\frac{1}{4}}$$



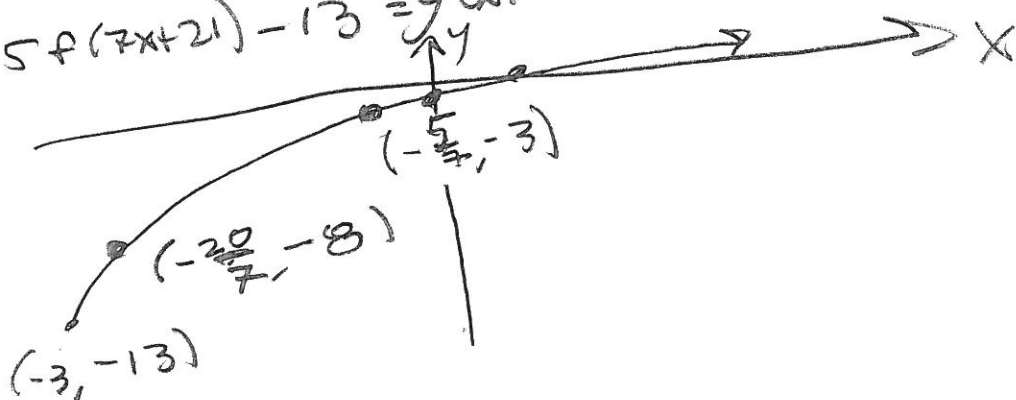
$$(2) \quad 5f(x+21)$$



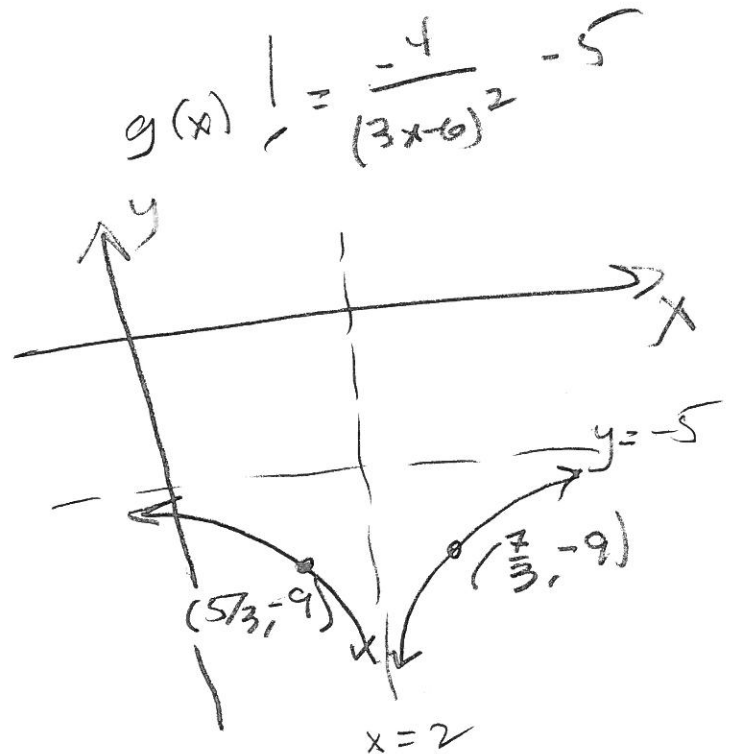
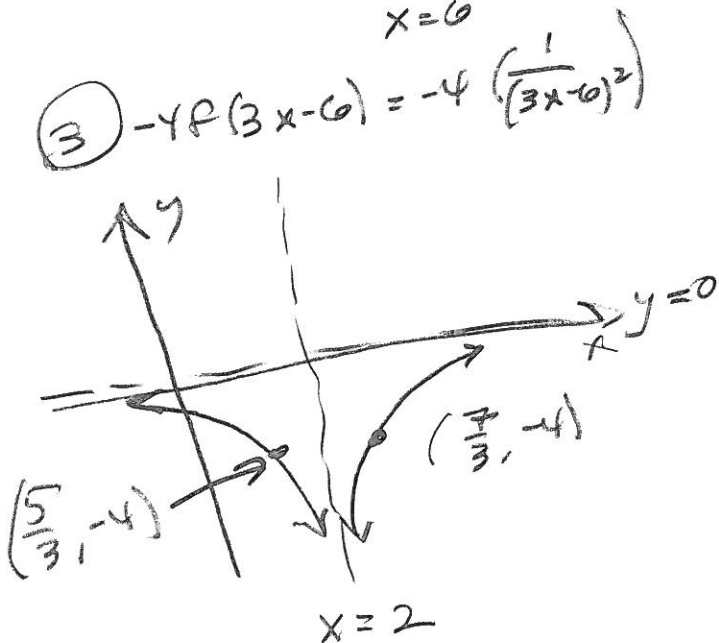
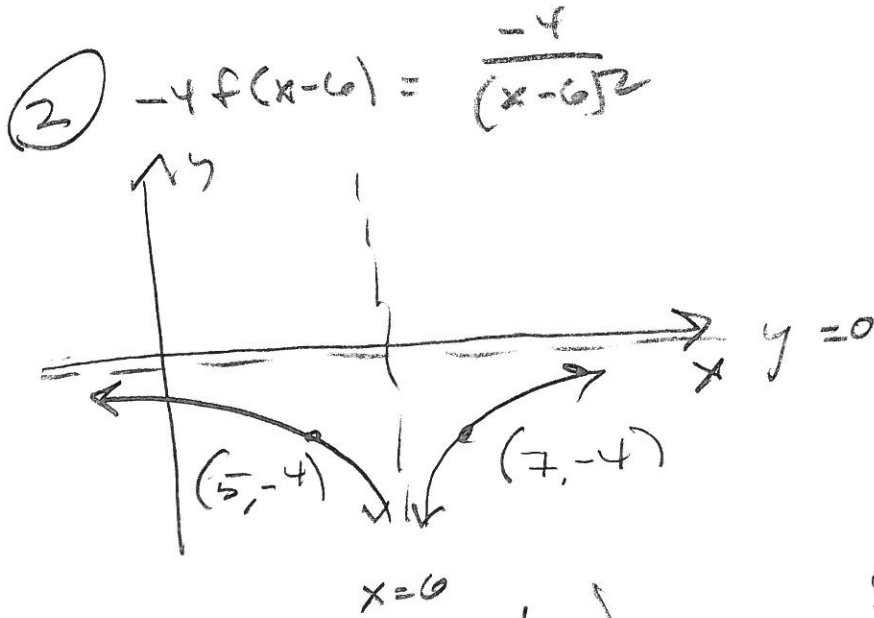
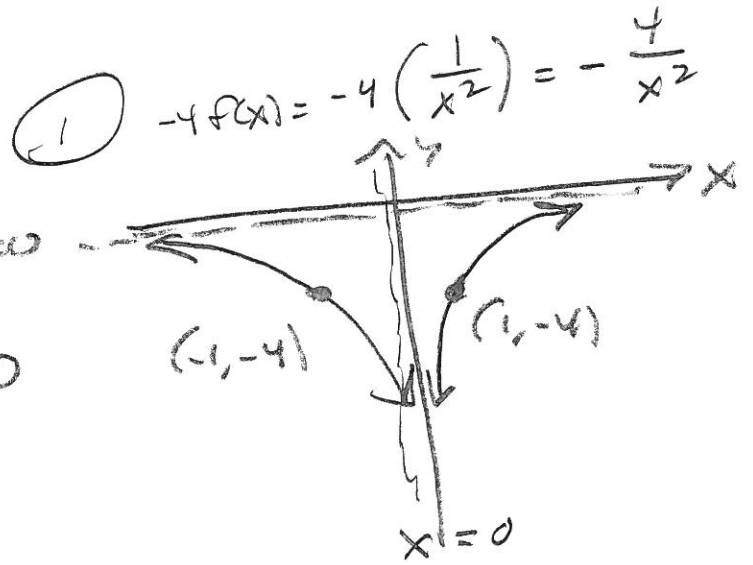
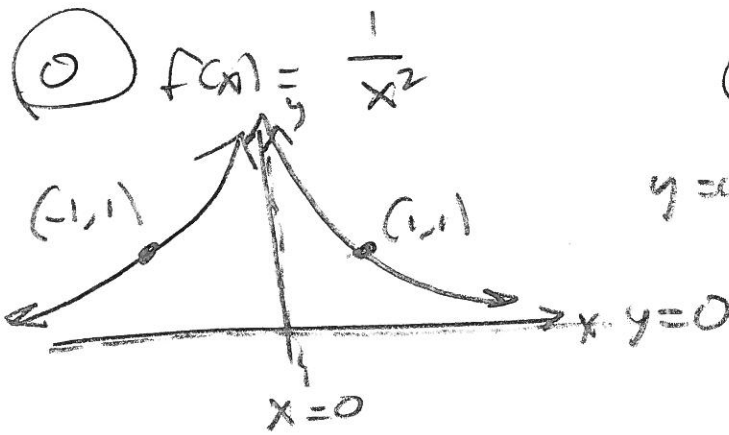
$$(3) \quad 5f(7x+21) = 5\sqrt[4]{7x+21}$$



$$(4) \quad 5f(7x+21) - 13 = g(x) = 5\sqrt[4]{7x+21} - 13$$



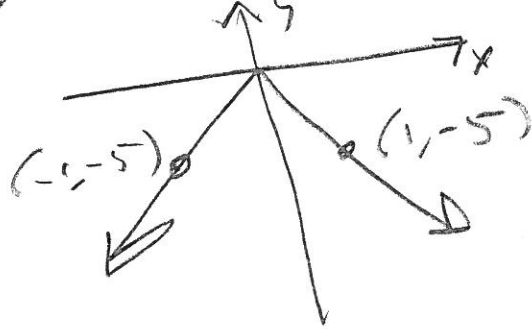
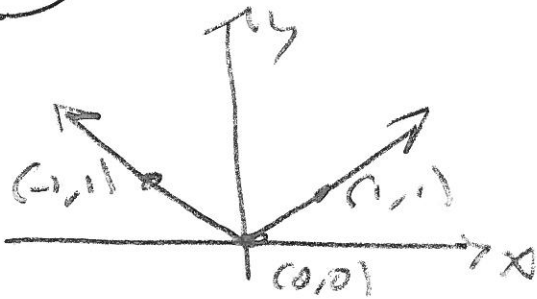
(3)  $g(x) = \frac{-4}{(3x-6)^2} - 5$



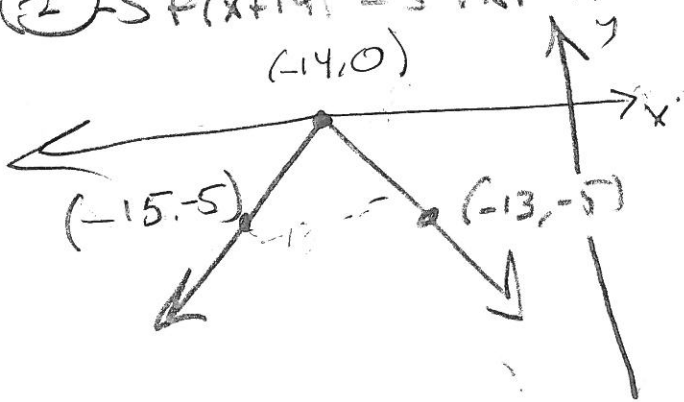
④  $g(x) = -5|7x+14| + 13$

①  $f(x) = |x|$

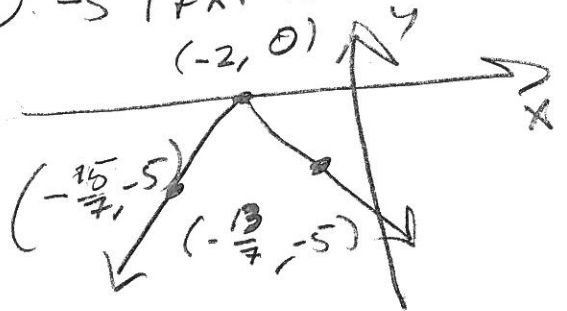
①  $-5f(x) = -5|x|$



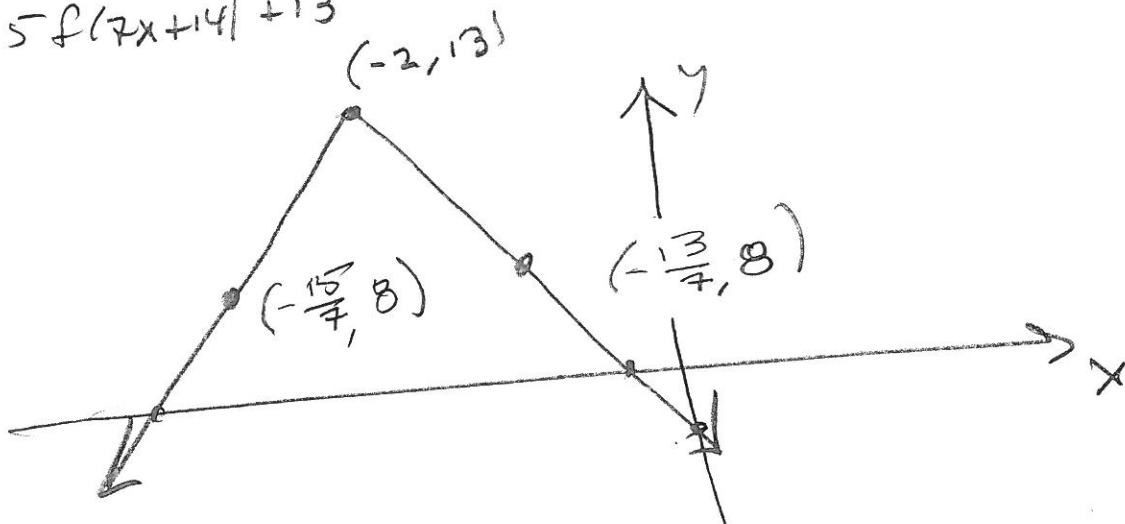
②  $-5f(x+14) = 5|x+14|$



③  $-5|7x+14| = -5f(7x+14)$

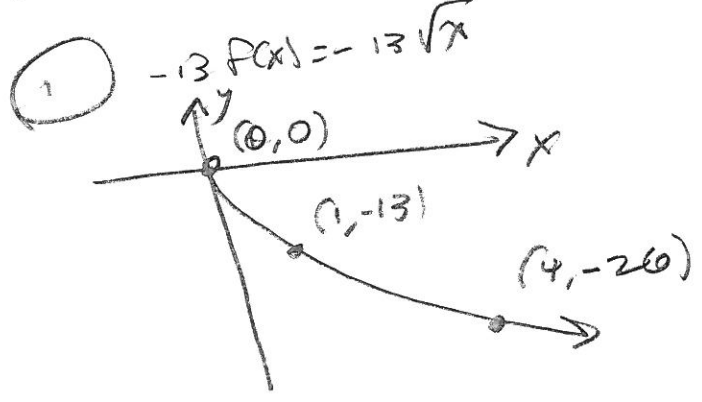
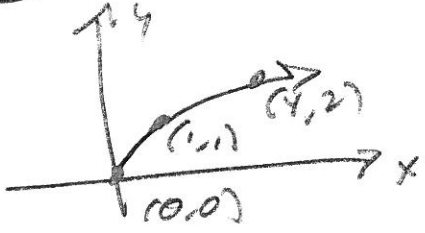


④  $-5f(7x+14) + 13$

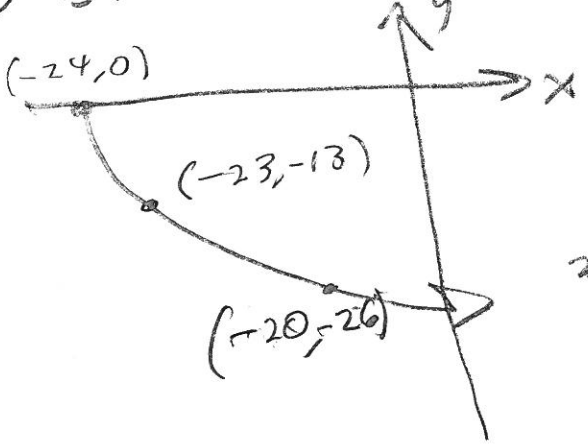


5.  $g(x) = -13\sqrt{6x+24} + 11$

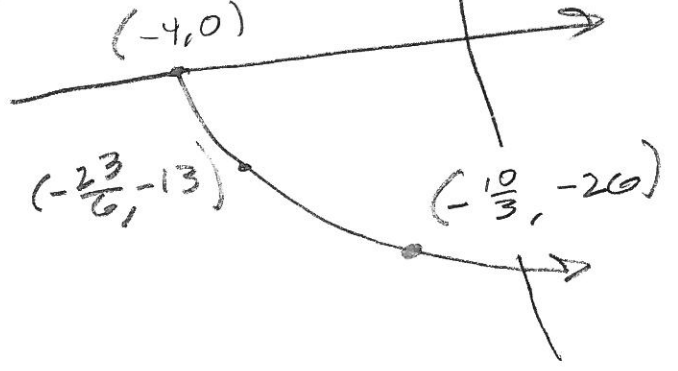
1.  $f(x) = \sqrt{x}$



2.  $-13f(x+24) = -13\sqrt{x+24}$

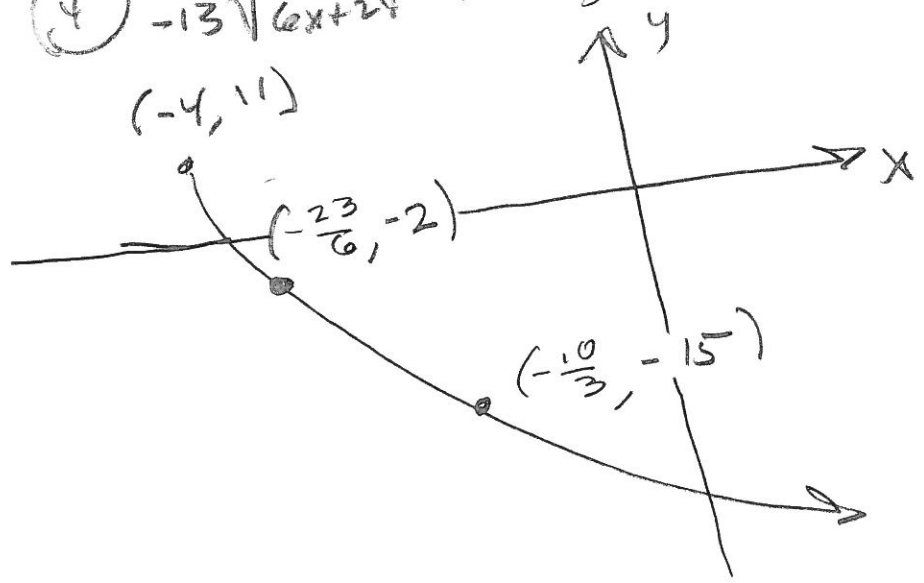


3.  $-13\sqrt{6x+24} = -13f(6x+24)$



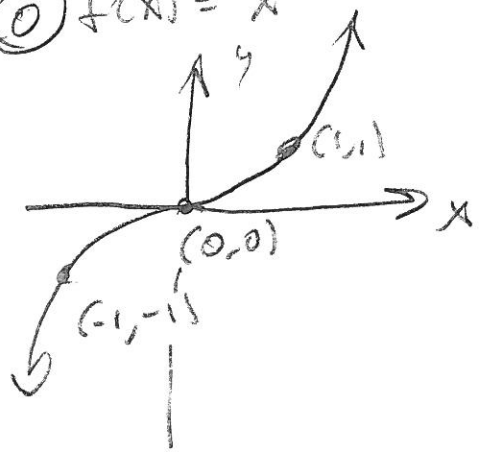
$\frac{20}{6} = \frac{10}{3}$

4.  $-13\sqrt{6x+24} + 11 = g(x)$

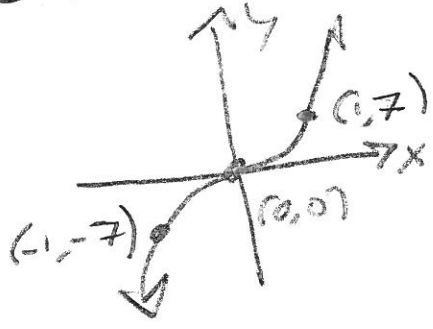


(6)  $g(x) = 7(5x+30)^5 + 8$

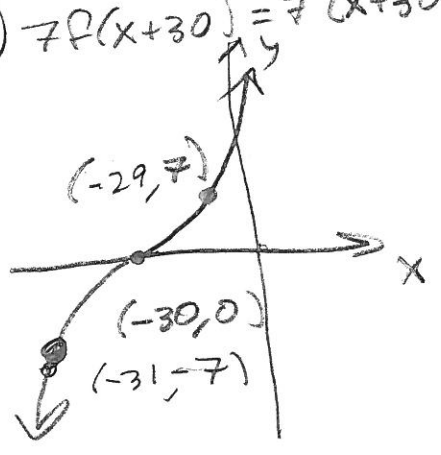
(0)  $f(x) = x^5$



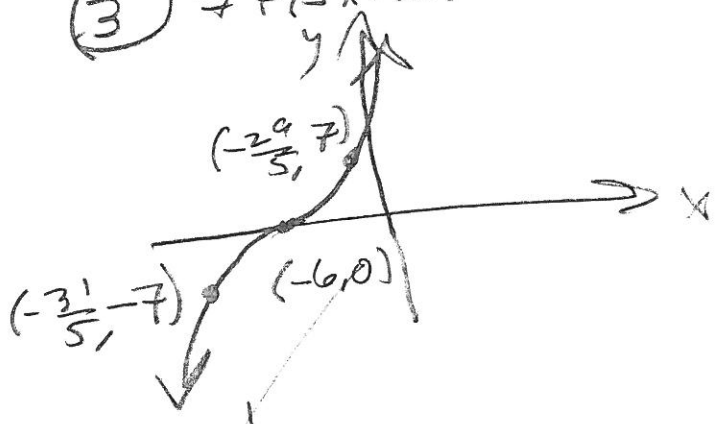
(1)  $7x^5$



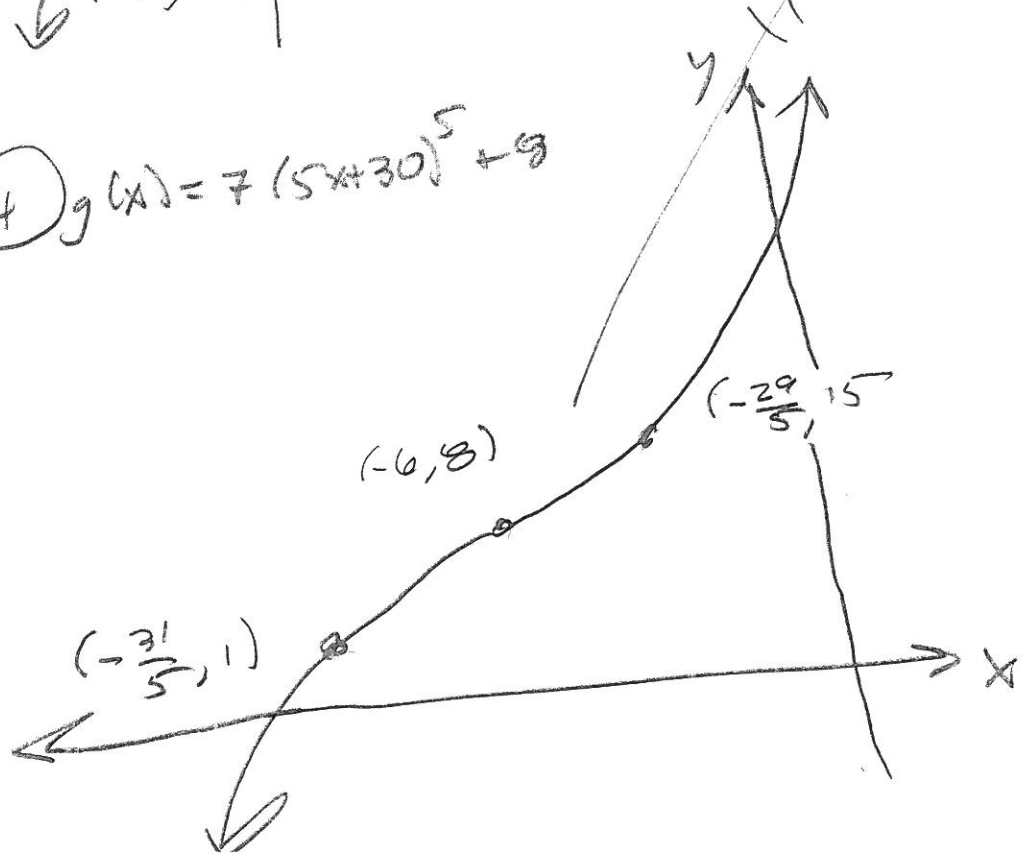
(2)  $7f(x+30) = 7(x+30)^5$



(3)  $7f(5x+30)^5 = 7f(5x+30)$

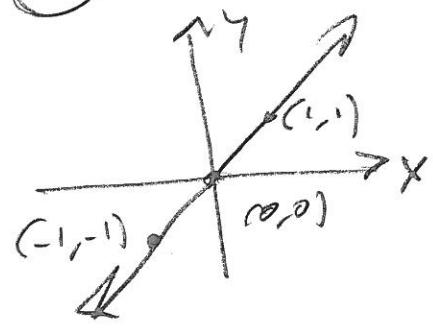


(4)  $g(x) = 7(5x+30)^5 + 8$

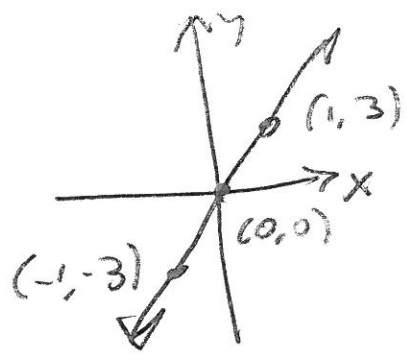


(7)  $g(x) = 3(x+15) - 1$

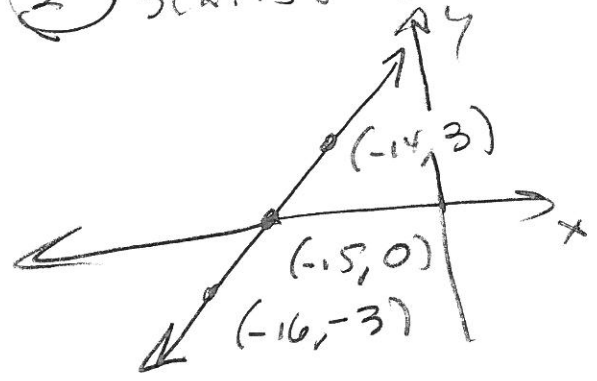
(8)  $f(x) = x$



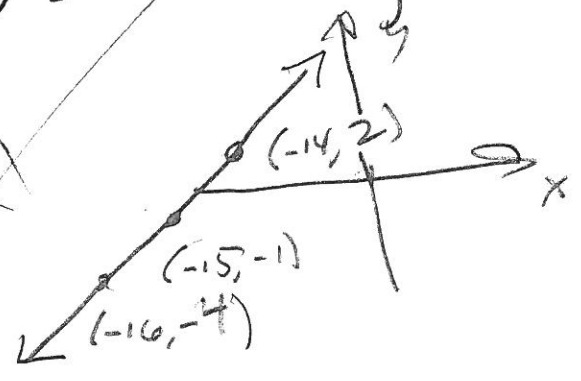
(9)  $3x = 3f(x)$



(10)  $3(x+15) = 3f(x+15)$



(11)  $3f(x+15) - 1 = 3(x+15) - 1 = g(x)$



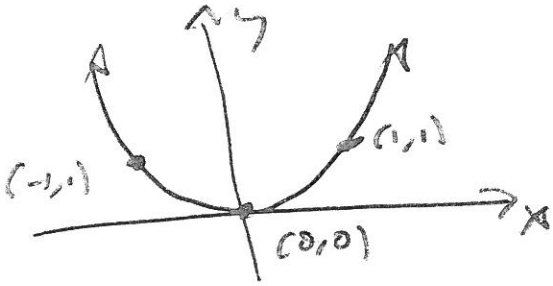
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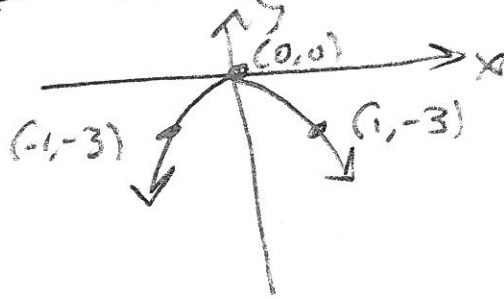
WP #2

$$\textcircled{8} \quad g(x) = -3(x+11)^2 + 7$$

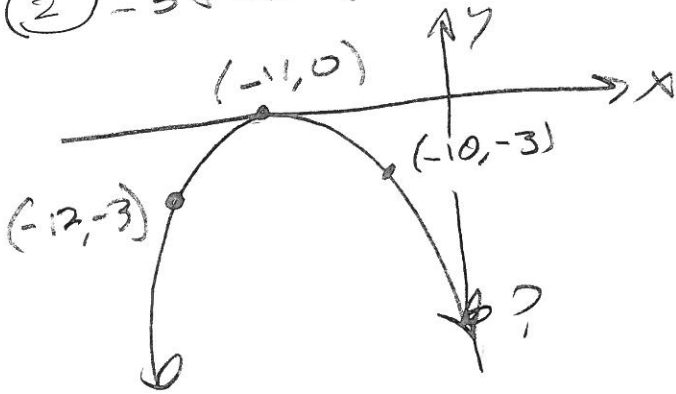
$$\textcircled{0} \quad f(x) = x^2$$



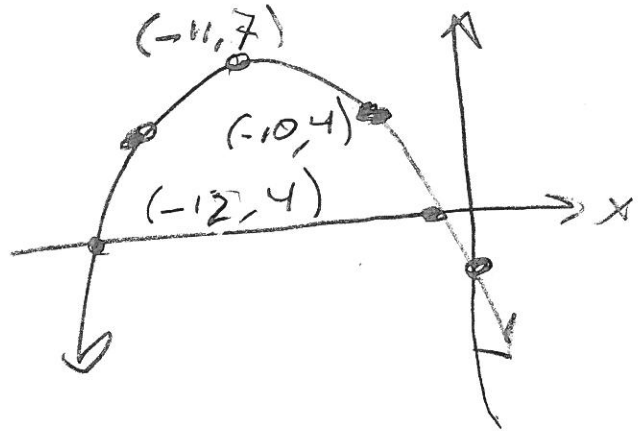
$$\textcircled{1} \quad -3x^2 = -3f(x)$$



$$\textcircled{2} \quad -3f(x+11) = -3(x+11)^2$$



$$\textcircled{3} \quad -3f(x+11) + 7 = g(x)$$



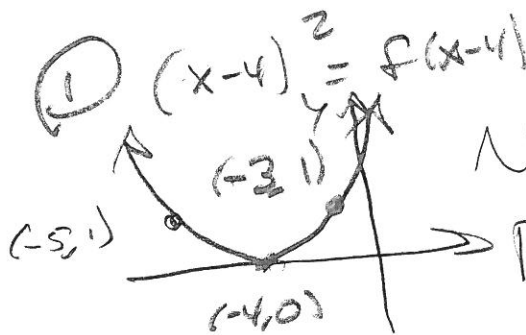
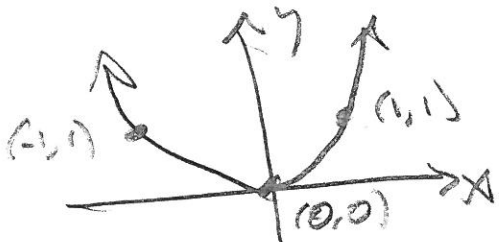


12) WP #2

⑨  $x^2 - 8x - 9 = x^2 - 8x + 4^2 - 16 - 9$

$= (x-4)^2 - 25$

①  $f(x) = x^2$

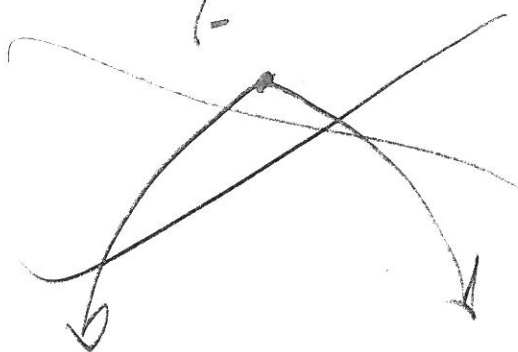


NO!

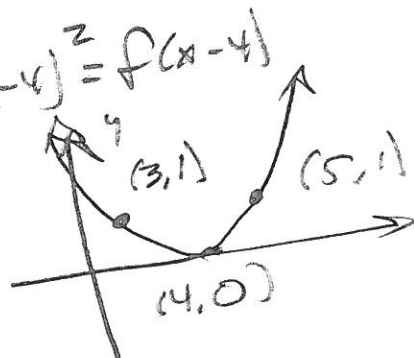
RIGHT

4 units!

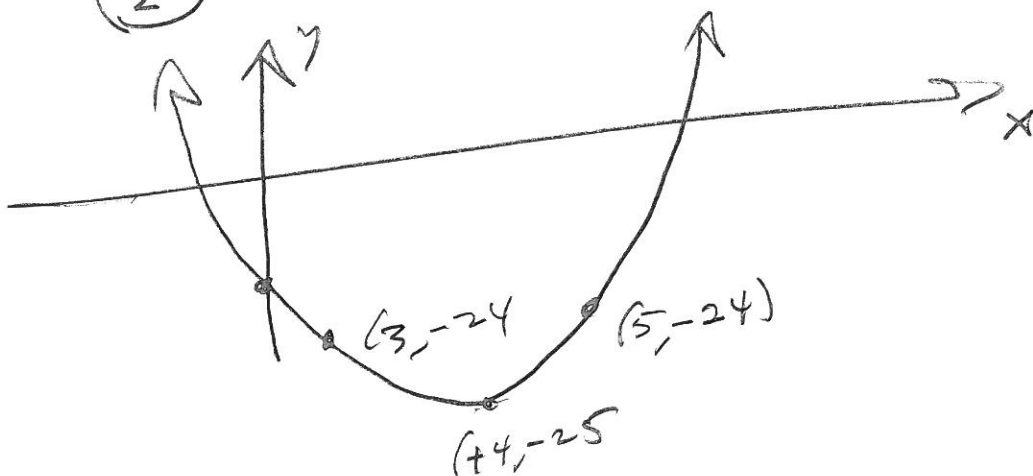
②  ~~$(x-4)^2 - 25 = f(x-4) - 25$~~



①  $(x-4)^2 = f(x-4)$



②  $(x-4)^2 - 25 = f(x-4) - 25$



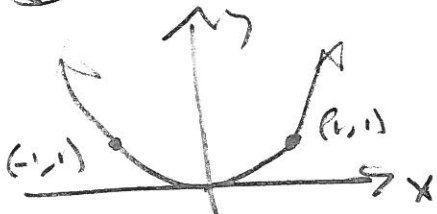
$$\textcircled{10} g(x) = 5x^2 + 4x + 17 = 5\left(x^2 + \frac{4}{5}x\right) + 17$$

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

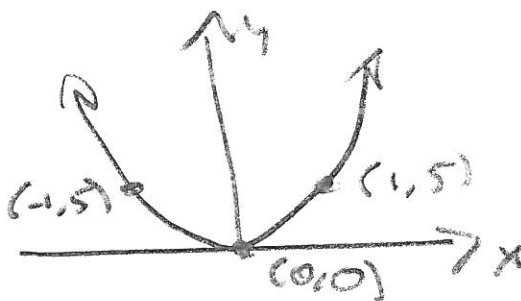
$$= 5\left(x + \frac{2}{5}\right)^2 + \frac{81}{5}$$

$$17 - \frac{4}{5} = \frac{85-4}{5} = \frac{81}{5}$$

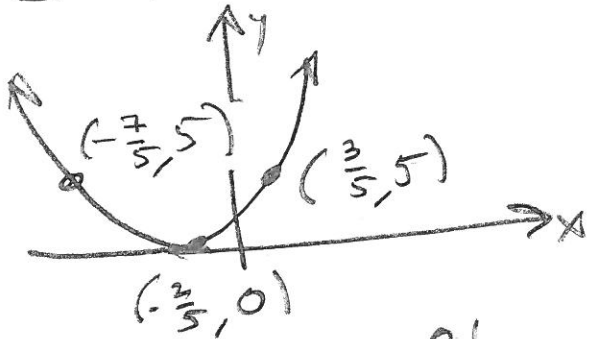
$$\textcircled{0} f(x) = x^2$$



$$\textcircled{1} 5x^2 = 5f(x)$$



$$\textcircled{2} 5\left(x + \frac{2}{5}\right)^2 = 5f\left(x + \frac{2}{5}\right)$$



$$5 + \frac{81}{5} = \frac{25+81}{5}$$

$$\textcircled{3} 5f\left(x + \frac{2}{5}\right) + \frac{81}{5}$$

