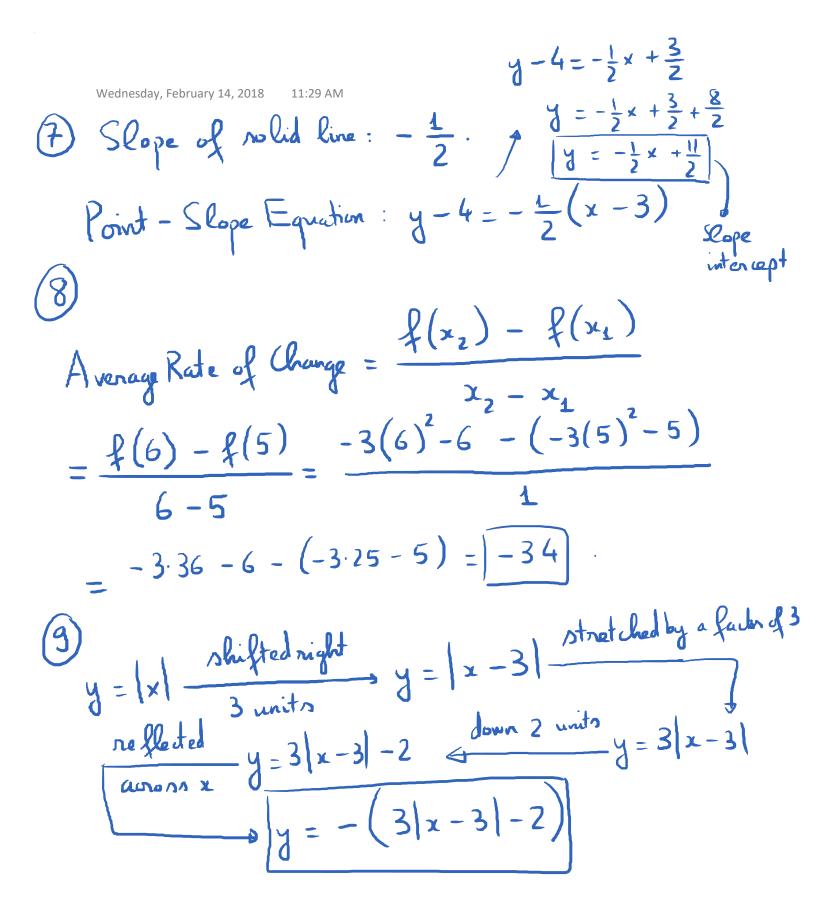
Practice Exam 1 - MC & Short Answers
Wednesday, February 14, 2018 11:13 AM
#1 Plug N = 176 to the equation and solve for x:

$$176 = 4x^2 + 5x + 2$$
.
 $4x^2 + 5x - 174 = 0$
 $x = \frac{-5 \pm \sqrt{(5)^2 - 4 \cdot (4) \cdot (-174)}}{8}$
 $x = 6$
 $x = \frac{-5 \pm 53}{8}$
 $x = 6$
 $x = \frac{58}{8}$ (an't be negative
 $y = \frac{58}{8}$ (an't be negative
 $y = \frac{58}{8}$ (an't be negative
 $y = \frac{1930}{8}$.
So, the answer in 1996 ($x = 6$ years after 1990)
(2) $|8x + 6| + 4 = 7$
 $|8x + 6| = 3$
 $8x + 6 = 3$ on $8x + 6 = -3$
 $x = -\frac{3}{8}$ on $x = -\frac{9}{8}$.
Solution set: $\{-\frac{3}{8}, -\frac{9}{8}\}$

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3) The relation in NOT a function because the input
3 connesponds to 2 outputs : -9 and 3.
(4)
$$f(-2) = \sqrt{-2+6} = \sqrt{4} = 2$$
.
(5) $h(-6) = -6-2 = -8$.
(6) $Slope = \frac{-8-(-3)}{-4-(-8)} = \frac{-8+3}{-4+8} = \frac{-5}{4} = -\frac{5}{4}$.
Point - Slope Equation: $y - (-3) = -\frac{5}{4}(x - (-8))$.
 $y + 3 = -\frac{5}{4}x - \frac{40}{4}$.
 $y = -\frac{5}{4}x - 10 - 3$.
 $y = -\frac{5}{4}x - 13$.



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10)
$$c(x) = 2x + 65$$
 flat fee
\$2 pen mile for x miles
 $c(15) = 2.15 + 65 = 95
(11) $x^{2} + 4x - 45 = 0$
 $(x - 5)(x + 9) = 0$
 $x = 5$ on $x = -9$.
Solution set: $\{-9, 5\}$
(12) $y = |x| = 8$ units to the right $y = |x - 8|$

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