Name: _____ Algebra
Date: _____ Review
Class: _____ Graded Homework 5

Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.
NO WORK = ZERO CREDIT

1) [3] When solving the equation $4(3x^2 + 2) - 9 = 8x^2 + 7$, Emily wrote $4(3x^2 + 2) = 8x^2 + 16$ as her first step. Which property justifies Emily's first step?

(1) addition property of equality
(2) commutative property of addition
(3) multiplication property of equality
(4) distributive property of multiplication over addition

2) [3] If $A = 3x^2 + 5x - 6$ and $B = -2x^2 - 6x + 7$, then $A - B$ equals

(1) $-5x^2 - 11x + 13$
(2) $5x^2 + 11x - 13$
(3) $-5x^2 - x + 1$
(4) $5x^2 - x + 1$

3) [3] Which value of x satisfies the equation $\frac{7}{3}\left(x + \frac{9}{28}\right) = 20$?

(1) 8.25
(2) 8.89
(3) 19.25
(4) 44.92

4) [3] John has four more nickels than dimes in his pocket, for a total of \$1.25. Which equation could be used to determine the number of dimes, x, in his pocket?

(1) $0.10(x + 4) + 0.05(x) = \$1.25$
(2) $0.05(x + 4) + 0.10(x) = \$1.25$
(3) $0.10(4x) + 0.05(x) = \$1.25$
(4) $0.05(4x) + 0.10(x) = \$1.25$

5) [4] Simplify: $\frac{(x-2)(4+x)-2x-x^2}{x^2+8-(9x+x^2)-9x}$

6) [4] Is x = -6.5 a solution of: $8 + 10x - (x^2 - 4x) = -4x + 2(10x - 15) - x^2 + 51$

7) [4] 3 friends have a fenced in back yard. Steve needs 50 more than 1/3 as much fence as Brett needs to enclose his yard. Marvin needs 10 more than twice as much fence as Steve needs to enclose his yeard. The total fence that all of them need together is the same amount as 150 more than 5 times how much Steve needs. How much fence does Marvin need?

8) [3] You tutor says that all numbers under a radical (square root) are irrational. Are they right or wrong? Explain.