

NAME: \_\_\_\_\_

**MATH 11009**

**HOMEWORK #3 (12 pts)**

**SPRING 2013**

SHOW ALL WORK FOR FULL CREDIT — PLEASE CIRCLE YOUR FINAL ANSWER  
EXACT ANSWERS ONLY – SIMPLIFY ALL ANSWERS

DUE: TUESDAY, FEBRUARY 19, 2013 AT THE BEGINNING OF CLASS

1. (1.5 pts) Solve:  $4x(2x - 5) = 6$

2. (1.5 pt) Solve:  $5(3x - 4)^2 - 120 = 0$

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Homework Score:

Course Grade:

12

190 =

3. (1.5 pt) Solve:  $2x^2 - 76 = 20x$

4. (1.5 pt) Solve:  $40x^2 + 18x - 36 = 0$

5. (1.5 pt) Solve:  $(3x - 5)^2 - 3(3x - 5) - 18 = 0$

6. (1.5 pts) Solve:  $32x^3 - 48x^2 - 14x + 21 = 0$

7. (1.5 pts) Solve:  $24x^3 + 21x^2 - 3x = 0$

8. (1.5 pts) The profit for a product  $P$  (in thousand dollars) is given by

$$P(x) = -15x^2 + 180x - 405$$

where  $x$  is the number of tons of product produced and sold. How many tons give break-even (that is, give zero profit) for this product?