Name: Solutions

MATH 1010-2: QUIZ #2 SOLUTIONS[1]

no calculators allowed!

Septmeber 2, 2010

1. (3 points) Simplify the following expression:

$$-3a^4 + 6a - a + 8 + a^4.$$

Solution: Grouping together like terms we get

$$-3a^4 + a^4 + 6a - a + 8,$$

and then combining them we obtain

$$-2a^4 + 5a + 8,$$

which is the answer.

2. (4 points) Simplify the following expression:

$$-5(a^2 - 2) + a^2(a + 3).$$

Solution: We first use the distributive law to remove the parentheses

$$-5a^2 + 10 + a^3 + 3a^2,$$

and then combine like terms to arrive at our answer

$$a^3 - 2a^2 + 10.$$

3. (3 points) Solve the following equation for a:

$$4(a - 1) = 3(a + 2)..$$

Solution: We first simplify both sides using the distributive property to get

$$4a - 4 = 3a + 6.$$

Then we isolate the variables on the left-hand side by subtracting $3a$ from both sides and adding 4 to both sides:

$$4a - 4 - 3a + 4 = 3a + 6 - 3a + 4.$$

This gives

$$a = 10,$$

which is the answer.

[1]There were four versions of this quiz distributed in class. They were all identical except that the variable names on each version were different: some had a's, others x's, y's, or z's. The order of the problems was also different on different versions.