Math 1324
Solutions to Exam #3 Review

1. \((-3, 2, 1)\)
2. Infinitely many solutions. The general solution is: \(\left( \frac{17}{5}, -\frac{3}{5}z, \frac{18}{5} - \frac{2}{5}z, z \right)\).
3. 1.25 servings of tomato soup and 1.5 servings of wheat bread
4. 80 mg of caffeine in a serving of coffee, 80 mg of caffeine per serving in Red Bull, and 37 mg of caffeine per serving of Mountain Dew
5. The golf course has 4 par-3 holes, 10 par-4 holes, and 4 par-5 holes
6. 24 acres of soybeans and 12 acres of wheat for a maximum profit of $5520
7. 15 cans of “Gourmet Dog” and 25 cans of “Chow Hound”
8. Maximum is \(45/2\) when \(x_1 = 0, x_2 = 9/2, x_3 = 0, x_4 = 0, x_5 = 18,\) and \(x_6 = 57/2\)
9. 250 units of A, none of B or C for a maximum profit of $1000.