**AGR 150 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Ag-O-Metric**

**Make-up plan for 10/12 /2016 Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Allan has four chicken houses 43 feet wide and 460 feet long. The roof makes a 20° angle with the horizontal.
   1. What is the area of the floor?
   2. What length rafters are needed for the roof?
   3. How many 3-foot-wide sheets of metal are needed to roof the four houses?
2. Mr. Chen developed a balanced ration of 21 percent CP for his layers. He used corn with 8.3 percent CP at $4.92 per bushel and 40 percent (CP) poultry supplement at $14.95 per 50-pound bad.
   1. How many pounds of each feedstuff are needed to make 100 lb of ration?
   2. How many kilograms of each feedstuff were used?
   3. What was the cost of the ration per ton?
3. Joe has six chicken houses with an average of 24,200 chickens. He had a 4.6 percent loss. His feed-to-gain ratio was 2.2 to 1. He sold the chickens in 51 days weighing 5.45 pounds each.
   1. How many chickens were lost?
   2. Express the pounds of chickens sold using scientific notation with the correct number of significant digits.
   3. How many tons of feed were fed to the chickens?
4. You have 200,000 layers that are replaced with pullets every 16 months. The layers are replaced monthly, so at the end of 16 months all layers have been replaced. The replacement pullets cost $10.50 each.
   1. How many layers are replaced per month?
   2. What was the cost of the replacement pullets per month?
   3. What is the annual expense for replacement pullets?
5. Juanita has 10,800 layers. The layers have a production life of 18 months with 76 percent egg production.
   1. One hen is expected to lay how many eggs in 18 months?
   2. How many dozen eggs are expected per month?
   3. How many dozen eggs are expected in the production life of the 10,800 layers? Express your answer using scientific notation with the correct number of significant digits.