5. (14 pts) You can purchase steers weighing 700 lb for $92/cwt. Feed costs $110/ton, and veterinary, marketing, taxes, equipment, electricity, and labor costs add up to $30 per head. You can expect the steers to gain 2.8 lb per day and have a feed efficiency of 7.5. The steers will weigh 1,200 lb when ready for slaughter, and you can expect a 2% death loss.

A. (4 pts) Calculate the feed cost for a steer. (Circle your answer.)

\[
\text{Gain} = 1200 - 700 = 500 \text{ lb} \\
\text{Feed @ $110/ton} = \frac{500}{2.8} \text{ lb feed} = \frac{500}{28} \text{ lb feed} \\
\text{gain} \times \frac{7.5 \text{ lb feed}}{1 \text{ lb gain}} \times \frac{3.750 \text{ lb feed}}{1} = \frac{206.25 \text{ feed costs}}{}
\]

B. (4 pts) Using the feed cost from part A and other information given, what will the steers have to be sold for (in $/cwt) to break even? (Circle your answer.)

\[
700 \times \frac{92}{1200} = \frac{644.00 \text{ purchase price}}{206.25 \text{ feed}} + \frac{30.00 \text{ "other"}}{880.25 \text{ total cost}} \\
\frac{880.25}{1200 \times .98} = \frac{880.25}{1176 \text{ lb}} = \frac{.7485}{1176 \text{ lb}} = \frac{?.45/cwt}{-1}
\]

C. (3 pts) Using appropriate numbers from part B, what will the steers have to be sold for (in $/cwt) to make a $25 profit per head? (Circle your answer.)

\[
\frac{880.25 \text{ total cost}}{25.00 \text{ profit}} = \frac{905.25 \text{ lb}}{769.8/1176 \text{ lb}} = \frac{76.98/\text{cwt}}{or 770/\text{cwt}} \\
\frac{905.25}{1200 \text{ lb}} = \frac{75.49/\text{cwt}}{}
\]

D. (3 pts) Calculate the feed cost per cwt gained for the steers. (THINK!)

\[
\frac{206.25 \text{ feed cost}}{5 \text{ cwt gain}} = \frac{41.25/\text{cwt gain}}{}
\]

**Bonus**

**PLEASE CIRCLE YOUR ANSWERS FOR THE PROBLEMS.**