

Your Name (please print): _____

Student I.D. # _____ Quiz Section _____

INSTRUCTIONS: You are allowed one 5×8 note card of handwritten notes (one side) and a scientific (non-graphing!) calculator. You must SHOW YOUR WORK to receive credit. Write neatly. Label your answers clearly.

1 (10 points total) Lou is making cards and selling them over the Internet. He first produced a batch of 100 cards and his Total Cost was \$160. He next produced a batch of 200 cards and his Total Cost was \$200.

(a) (2 points) Give a linear function $C(x)$ relating the Total Cost of producing a batch of cards to the number of cards in the batch x .

(b) (3 points) Find a (rational) function $A(x)$ that computes the Average Cost per card when Lou produces a batch of x cards.

(c) (5 points) Give a function $N(y)$ that computes the number of cards in the batch in terms of the Average Cost per card.

OVER

2 (10 points total) Chuck and Sue are on a carousel. Chuck is on a green dragon which is 12 feet from the center of the carousel, and Sue's horse is 18 feet from the center. Chuck is moving at 9 ft/sec.

(a) (5 points) What is Sue's linear speed?

(b) (5 points) The ride makes 20 complete revolutions before stopping. How long does it last?