

Quiz #3
ECO 3401
Dr. Gerking

Key

Directions:

Bubble in the correct answer to each question on your BROWN scan-tron sheet. Write your name LEGIBLY on the scan-tron sheet, then find your form code at the top right corner of this page. Write the form code in the boxes at the top of the scan-tron sheet, and bubble in the numbers appropriately. You will turn in the scan-tron sheet, and keep this quiz sheet for your records.

Solve the following:

1. $-3 \geq 8(2-x)$

- (a) $x \leq 2.825$
- (b) $x \leq 2.375$
- (c) $x \geq 2.375$
- (d) $x \geq 2.825$
- (e) None of these

$$-3 \geq 16 - 8x$$

$$-19 \geq -8x$$

$$2.375 \leq x$$

2. To produce 1 unit of a new product, a company determines the cost for material is \$3.50 and the cost for labor is \$5. The constant fixed cost is \$7,000. If the market price of the product is \$9.40 per unit, determine the least number of units that must be sold by the company to realize a profit.

- (a) 7,770 units
- (b) 7,778 units
- (c) 503 units
- (d) 7,800 units
- (e) None of these

$$R - C = \pi > 0$$
$$(9.40)x - [(3.50)x + (5.00)x + 7000] > 0$$

$$9.40x - 8.50x - 7000 > 0$$

$$0.9x > 7000$$

3. Solve the equation $|x-5|=8$

- (a) $x = -5$ or $x = 8$
- (b) $x = -13$ or $x = 3$
- (c) $x = 5$ or $x = -8$
- (d) $x = 13$ or $x = -3$
- (e) None of these

$$x > 7,777.78$$

$x > 7,778$ to show a profit.

$$x - 5 = -8$$

$$x = -3$$

$$\text{or } x - 5 = 8$$

$$\text{or } x = 13$$