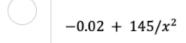
Weekly Quiz #10

Problem 1.

Given $R(x) = 5x - 0.02 x^2$, C(x) = 145 + 1.1 x, find the marginal profit function.

Answers *



$$-0.04x + 3.9$$

$$-0.02 - 145/x^2$$

Problem 2.

Given revenue function $R(x) = -0.03x - 3x^3$, find the marginal revenue function.

Answers *

$$-0.03 - 3x^2$$

$$-0.03 - 3x^2$$

$$-0.03 - 9x^2$$

$$-0.03x + 9x^2$$

Problem 3.

	n cost function $C(x) = 175 - 0.8x$. What is the marginal cost function?	
nswers *		_
	175/x - 0.8	
	$175x - 0.8x^2$	
	0.8	
✓ [-0.8	
oblem	14	
The	production cost per week for producing x widgets is given by, $C(x) =$	500 + 350x
0.09 Wha	production cost per week for producing x widgets is given by, $C(x) = 9x^2$ for $0 \le x \le 1000$. at is the marginal cost at $x = 300$?	500 + 350 <i>x</i>
0.09 Wha	$9x^2$ for $0 \le x \le 1000$. at is the marginal cost at $x = 300$?	500 + 350 <i>x</i>
0.09 Wha	$9x^2$ for $0 \le x \le 1000$. at is the marginal cost at $x = 300$?	500 + 350x
0.09	$9x^2$ for $0 \le x \le 1000$. at is the marginal cost at $x = 300$?	500 + 350x

Problem 5.

The production cost per week for producing x widgets is given by, $C(x) = 500 + 350x - 0.09x^2$ for $0 \le x \le 1000$.			
Wila	t is the cost to produce the $301st$ widget?		
Answers*			
	97695		
	256		
	97656		
\checkmark	296		
Problem	i 6.		
Find	$y' = dy/dx \text{ if } x^2 - y^2 = 1.$		
Answers	*		
	2x/y		
\checkmark	x/y		
	y/x		
	cannot be determined		

Problem 7.

Find	the derivative of y from the implicit function: $3xy + y^2 = 0$.
Answers	*
\checkmark	-3y/(3x+2y)
	3x/2y
	-2y/3x
	-3x/2
Problem	8.
Find	the derivative of y given that $x^2 + 2xy + y^2 = 1$.
Answers	•
\checkmark	-1
	-x
	-1/(x + y)
	x/y

Problem 9.

	se that a 2% increase in price results in a 6% decrease in quantity ded. Own-price elasticity of demand is equal to:	
Answers *		
	1/3	
	6	
	2	
✓	3	
roblem 1		
The	price decreases from £2,000 to £1,800. Quantity demand eases from 5000 to 6000 units. Which of the following is condefinition in lecture note or the textbook)	
The	price decreases from £2,000 to £1,800. Quantity demand eases from 5000 to 6000 units. Which of the following is condefinition in lecture note or the textbook)	
The incre	price decreases from £2,000 to £1,800. Quantity demand eases from 5000 to 6000 units. Which of the following is condefinition in lecture note or the textbook)	
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The incre	price decreases from £2,000 to £1,800. Quantity demand eases from 5000 to 6000 units. Which of the following is odefinition in lecture note or the textbook) * The price elasticity of demand is -1	

Problem 11

The price of a commodity rises from 5 to 6 and as a result its demand falls from 100 to 80 units. Find the price elasticity of demand using percentage method

Answers *			
	0.5		
	2		
✓	1		
	undefined		
Problem 12.			
	n the price decreases from \$12 to \$6 (50%), the quantity of demand asses from 40 to only 50 (25%). The elasticity coefficient is		
Answers *			
	0.6		
	.33		
\checkmark	0.5		
	2		