

NAME: \_\_\_\_\_

BATCH: \_\_\_\_\_

**Estimated Demand ( $R^2-.9$ )**

Intercept	15	7.90	1.9
Own Price	-5	1.92	-2.6
Price of Other Good	10	5.03	2.0
Income	1	0.67	1.5

**Estimated Supply ( $R^2-.4$ )**

Intercept	25	22.7	1.1
Own Price	5	1.4	3.5

**ANSWERS 2-10**

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1. Write model's equations. Mark satisfactory (or not)  $R^2$  &  $t$ -stat using + / -

**Assume:**  
 $I = \$40$ ;  $P_O = \$5$

**Find:**

- Equilibrium  $P_E$ ,  $Q_E$ , total revenue (TR)
- Own price elasticity at equilibrium
- Cross price elasticity at equilibrium
- Income elasticity at equilibrium

**Assume I- $P_O$  change:**  
 $I = \$50$ ;  $P_O = \$7$

**Find:**

- Equilibrium  $P_E$ ,  $Q_E$ , total revenue (TR)
- Own price elasticity at equilibrium
- Cross price elasticity at equilibrium
- Income elasticity at equilibrium
- Expected TR with .4 probability of income-price change

1. **ANSWER 1**

$Q_D =$	( )	( )	( )	( )	( )
$Q_S =$	( )	( )	( )	( )	( )

1. In the exercise model "other good" is a complement:

- True
- False (Correct)

3. Diffusion index is a weighted average of changes in individual leading indices

- True
- False (Correct)

5. Possible problems with regressions include:

- omitted variables
- identification error
- multicollinearity
- all of the above (Correct)

7. Multiplicative demand function  $Q_D = AP^a P_O^b I^\gamma$  transformed into a linear form is estimated as:

- $\ln Q_D = A + a \ln P + \beta \ln P_O + \gamma \ln I$
- $\ln Q_D = \ln A + \ln a + \ln P + \ln \beta + \ln P_O + \ln \gamma + \ln I$
- $\ln Q_D = \ln A + a \ln P + \beta \ln P_O + \gamma \ln I$  (Correct)
- $\ln Q_D = \ln a + a \ln P + \ln \beta + b \ln P_O + \ln \gamma + c \ln I$

9. Expected value is a measure of:

- the central tendency (Correct)
- the dispersion of outcomes
- the variation of outcomes
- risk

2. In the exercise model main good is a normal good:

- True (Correct)
- False

4. Ratio-to-trend adjustment is used to improve results of time series regressions

- True (Correct)
- False

6. If multiplicative equations are transformed to linear form using logarithms and then estimated using least-square regressions, regression coefficients represent:

- elasticities (Correct)
- change in Y per unit change in associated X
- marginal change in Y per unit change in associated X
- average change in Y per unit change in associated X

8. Which of the following statements about total function (TF) and its marginal function (MF) is correct :

- Value of MF at a point of TF equals slope of a line perpendicular to that point on the TF
- MF intersect TF at either MIN, or MAX point of TF
- If  $MF=0$ , TF is either at MIN, or at MAX (Correct)
- If  $MF < 0$ , TF increasing, if  $MF > 0$ , TF decreasing

10. Luxuries are usually goods with:

- own price elasticity of demand more than minus one
- cross-price elasticity of demand less than zero
- income elasticity of demand more than one (Correct)
- none of the above

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**Estimated Demand ( $R^2-.4$ )**

Intercept	90	60.0	1.5
Own Price	-3	1.2	-2.6
Price of Other Good	10	2.9	3.5
Income	-1	0.5	-2.0

**Estimated Supply ( $R^2-.9$ )**

Intercept	30	23.1	1.3
Own Price	5	1.9	2.7

1. Write model's equations. Mark satisfactory (or not)  $R^2$  &  $t$ -stat using + / -

**Assume:**  
 $I = \$50$ ;  $P_O = \$3$

**Find:**

- Equilibrium  $P_E$ ,  $Q_E$ , total revenue (TR)
- Own price elasticity at equilibrium
- Cross price elasticity at equilibrium
- Income elasticity at equilibrium

**Assume I- $P_O$  change:**  
 $I = \$40$ ;  $P_O = \$2$

**Find:**

- Equilibrium  $P_E$ ,  $Q_E$ , total revenue (TR)
- Own price elasticity at equilibrium
- Cross price elasticity at equilibrium
- Income elasticity at equilibrium
- Expected TR with .5 probability of income-price change

1. **ANSWER 1**

$Q_D =$	( )	( )	( )	( )	( )
$Q_S =$	( )	( )	( )	( )	( )

**ANSWERS 2-10**

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1. In the exercise model main good is a normal good:

- A. True
- B. False (Correct)

3. Composite index is a weighted average of changes in individual leading indices

- A. True (Correct)
- B. False

5. Luxuries are usually goods with:

- A. income elasticity of demand more than one (Correct)
- B. cross-price elasticity of demand less than zero
- C. own price elasticity of demand more than minus one
- D. none of the above

7. Which of the following statements about total function (TF) and its marginal function (MF) is correct :

- A. If  $MF=0$ , TF is either at MIN, or at MAX (Correct)
- B. Value of MF at a point of TF equals slope of a line perpendicular to that point on the TF
- C. MF intersect TF at either MIN, or MAX point of TF
- A. If  $MF<0$ , TF increasing, if  $MF>0$ , TF decreasing

9. If multiplicative equations are transformed to linear form using logarithms and then estimated using least-square regressions, regression coefficients represent::

- A. elasticities (Correct)
- B. change in Y per unit change in associated X
- C. marginal change in Y per unit change in associated X
- D. average change in Y per unit change in associated X

2. In the exercise model "other good" is a substitute:

- A. True (Correct)
- B. False

4. Ratio-to-trend adjustment is used to improve results of cross-sectional regressions

- A. True
- B. False (Correct)

6. Expected value is a measure of:

- A. the dispersion of outcomes
- B. the variation of outcomes
- C. the central tendency (Correct)
- D. risk

8. Multiplicative demand function  $Q_D = AP^{\alpha}P_O^{\beta}I^{\gamma}$  transformed into a linear form is estimated as:

- A.  $\ln Q_D = A + \alpha \ln P + \beta \ln P_O + \gamma \ln I$
- B.  $\ln Q_D = \ln A + \ln \alpha + \ln P + \ln \beta + \ln P_O + \ln \gamma + \ln I$
- C.  $\ln Q_D = \ln A + \alpha \ln P + \beta \ln P_O + \gamma \ln I$  (Correct)
- D.  $\ln Q_D = \ln \alpha + \alpha \ln P + \ln \beta + \beta \ln P_O + \ln \gamma + \ln I$

10. Possible problems with regressions include:

- A. multicollinearity
- B. omitted variables
- C. identification error
- D. all of the above (Correct)

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**Estimated Demand ( $R^2-.9$ )**

Intercept	5	22.7	1.1
Own Price	-10	1.9	-2.6
Price of Other Good	-10	5.0	-2.0
Income	3	1.4	3.5

**Estimated Supply ( $R^2-.8$ )**

Intercept	25	13.2	1.9
Own Price	10	6.7	1.5

1. Write model's equations. Mark satisfactory (or not)  $R^2$  &  $t$ -stat using + / -

**Assume:**  
 $I = \$60$ ;  $P_O = \$4$

**Find:**

- Equilibrium  $P_E$ ,  $Q_E$ , total revenue (TR)
- Own price elasticity at equilibrium
- Cross price elasticity at equilibrium
- Income elasticity at equilibrium

**Assume I- $P_O$  change:**  
 $I = \$80$ ;  $P_O = \$5$

**Find:**

- Equilibrium  $P_E$ ,  $Q_E$ , total revenue (TR)
- Own price elasticity at equilibrium
- Cross price elasticity at equilibrium
- Income elasticity at equilibrium
- Expected TR with .6 probability of income-price change

1. **ANSWER 1**

$Q_D =$	( )	( )	( )	( )	( )
$Q_S =$	( )	( )	( )	( )	( )

**ANSWERS 2-10**

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|--|---|
| <p>1. In the exercise model main good is a normal good:<br/>A. True (Correct)<br/>B. False</p>   | <p>2. In the exercise model "other good" is a substitute:<br/>A. True<br/>B. False (Correct)</p>  |
| <p>3. Ratio-to-trend adjustment is used to improve results of cross-sectional regressions<br/>A. True<br/>B. False (Correct)</p>   | <p>4. Composite index is a weighted average of changes in individual leading indices<br/>A. True (Correct)<br/>B. False</p>   |
| <p>5. Multiplicative demand function <math>Q_D = AP^\alpha P_O^\beta I^\gamma</math> transformed into a linear form is estimated as:<br/>A. <math>\ln Q_D = A + \alpha \ln P + \beta \ln P_O + \gamma \ln I</math><br/>B. <math>\ln Q_D = \ln A + \ln \alpha + \ln P + \ln \beta + \ln P_O + \ln \gamma + \ln I</math><br/>C. <math>\ln Q_D = \ln A + \alpha \ln P + \beta \ln P_O + \gamma \ln I</math> (Correct)<br/>D. <math>\ln Q_D = \ln \alpha + \alpha \ln P + \ln \beta + \beta \ln P_O + \ln \gamma + \gamma \ln I</math></p> | <p>6. Which of the following statements about total function (TF) and its marginal function (MF) is correct :<br/>A. Value of MF at a point of TF equals slope of a line perpendicular to that point on the TF<br/>B. MF intersect TF at either MIN, or MAX point of TF<br/>C. If <math>MF &lt; 0</math>, TF increasing, if <math>MF &gt; 0</math>, TF decreasing<br/>D. If <math>MF = 0</math>, TF is either at MIN, or at MAX (Correct)</p> |
| <p>7. Expected value is a measure of:<br/>A. risk<br/>B. the central tendency (Correct)<br/>C. the dispersion of outcomes<br/>D. the variation of outcomes</p>   | <p>8. Luxuries are usually goods with:<br/>A. cross-price elasticity of demand less than zero<br/>B. income elasticity of demand more than one (Correct)<br/>C. own price elasticity of demand more than minus one<br/>D. none of the above</p>   |
| <p>9. Possible problems with regressions include:<br/>A. identification error<br/>B. omitted variables<br/>C. multicollinearity<br/>D. all of the above (Correct)</p>  | <p>10. If multiplicative equations are transformed to linear form using logarithms and then estimated using least-square regressions, regression coefficients represent::<br/>A. marginal change in Y per unit change in associated X<br/>B. average change in Y per unit change in associated<br/>C. change in Y per unit change in associated X<br/>D. elasticities (Correct)X</p>  |

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<b>ANSWERS 1</b>	<b>ANSWERS 2</b>	<b>ANSWERS 3</b>			
1. $Q=15-5P+10Po-1I$ + - + + - $Q=25-5P$ - - +	1. $Q=90-3P+10Po-1I$ - - + + - $Q=90-3P$ + - +	1. $Q=5-10P-10Po-3I$ + - + + + $Q=25-10P$ + + -	<b>B A</b>	<b>B A</b>	<b>A B</b>
2. <b>\$8/65/\$520</b>	2. <b>\$5/55/\$275</b>	2. <b>\$6/85/\$510</b>	<b>B A</b>	<b>A B</b>	<b>B A</b>
3. <b>-0.615</b>	3. <b>-0.273</b>	3. <b>-0.706</b>	<b>D A</b>	<b>A C</b>	<b>C D</b>
4. <b>0.769</b>	4. <b>0.545</b>	4. <b>-0.471</b>	<b>C C</b>	<b>A B</b>	<b>B B</b>
5. <b>0.615</b>	5. <b>-0.909</b>	5. <b>2.118</b>	<b>A C</b>	<b>A D</b>	<b>D D</b>
6. <b>\$11/80/\$880</b>	6. <b>\$5/55/\$275</b>	6. <b>\$8.5/110/\$935</b>			
7. <b>-0.688</b>	7. <b>-0.273</b>	7. <b>-0.773</b>			
8. <b>0.625</b>	8. <b>0.364</b>	8. <b>-0.455</b>			
9. <b>0.875</b>	9. <b>-0.727</b>	9. <b>2.182</b>			
10. <b>\$700</b>	10. <b>\$275</b>	10. <b>\$723</b>			