iClicker Pop Quiz 5
Modules 11 – 12

Instructor: Joseph Navelski
Teaching Assistant: Nabittun Nahar

WSU

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Question 1

The price elasticity of demand measures

(a) the slope of a budget curve.
(b) how often the price of a good changes.
(c) the responsiveness of the quantity demanded to changes in price.
(d) how sensitive the quantity demanded is to changes in demand.

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The price elasticity of demand measures

(a) the slope of a budget curve.
(b) how often the price of a good changes.
(c) **the responsiveness of the quantity demanded to changes in price.**
(d) how sensitive the quantity demanded is to changes in demand.

Question 2

If the Sunset Café reduces their prices by 20 percent, and the number of customers increases by 40 percent, what is the elasticity of demand?

(a) .5
(b) 2
(c) 20
(d) 40

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(b) **2**
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Question 3

If demand for a good is inelastic, what would the demand curve for this good look like

(a) It would be completely horizontal.
(b) It would be upward sloping.
(c) It would be downward sloping and relatively flat.
(d) It would be downward sloping and relatively steep.

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Question 4

Over longer periods of time, demand tends to become _____

(a) more elastic
(b) less elastic
(c) perfectly inelastic

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Question 5

When there are fewer substitutes, demand tends to be

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Question 6

Figure: The Demand for e-Books

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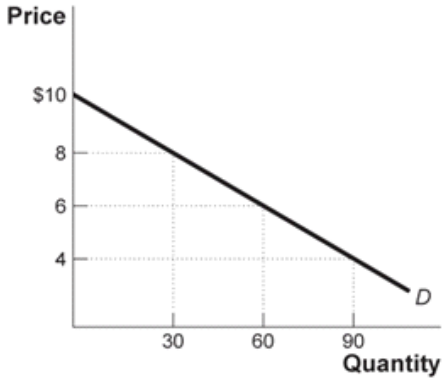

According to graph, the price elasticity of demand _____ when the price increases from 4 to 6 dollars _____ when it increases from 6 to 8 dollars. *(USE MIDPOINT METHOD)*

(a) is more elastic; than

(b) has the same elasticity; as

(c) is less elastic; than

(d) is unit elastic; and

Question 6

According to graph, the price elasticity of demand _____ when the price increases from 4 to 6 dollars _____ when it increases from 6 to 8 dollars. *(USE MIDPOINT METHOD)*

(a) is more elastic; than

(b) has the same elasticity; as

(c) **is less elastic; than** - See math key attached below.

(d) is unit elastic; and

Question 7

A 10 percent increase in the quantity of spinach demanded results from a 20 percent decline in its price. The price elasticity of demand for spinach is

(a) 20
(b) 2
(c) 10
(d) .5

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(a) 20
(b) 2
(c) 10
(d) **.5**

Question 8

The price elasticity of demand can range between

(a) -1 to 1
(b) 0 to infinity
(c) zero to 1

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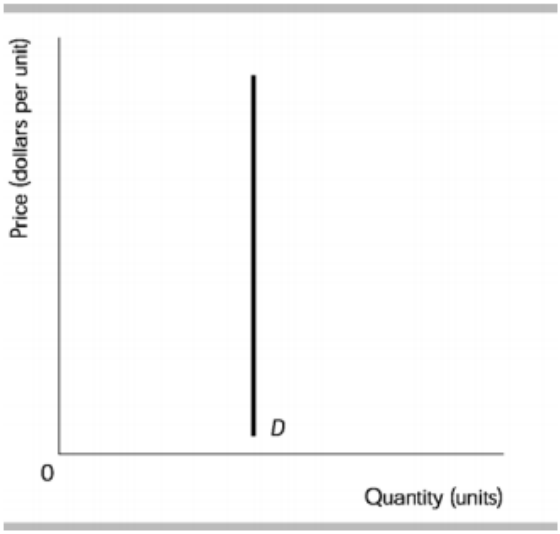
Question 9

The figure depicts a good with a vertical demand curve. The demand curve in the figure below illustrates the demand for a product with



(a) unit price elasticity of demand at all prices
(b) a price elasticity of demand that is different at all prices.
(c) infinite price elasticity of demand
(d) zero price elasticity of demand at all prices.

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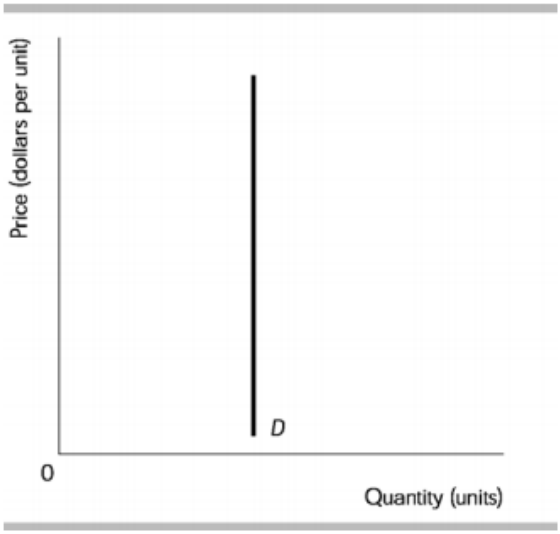

(a) unit price elasticity of demand at all prices
(b) a price elasticity of demand that is different at all prices.
(c) infinite price elasticity of demand
(d) **zero price elasticity of demand at all prices.**

Question 10

Use the figure below to calculate the price elasticity of demand for the segment CD (i.e. from point C to point D). *(Use the midpoint method and please take the absolute value.)*

Figure: The Demand for Shirts

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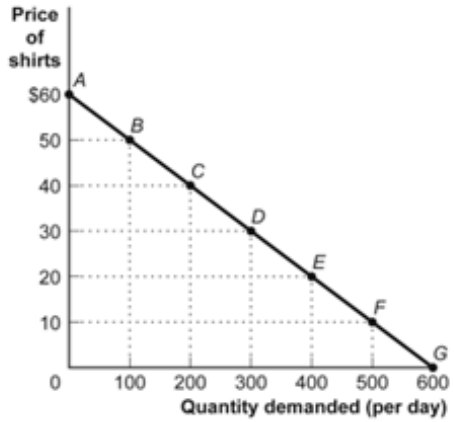

(a) .71
(b) 1
(c) 1.4
(d) .29

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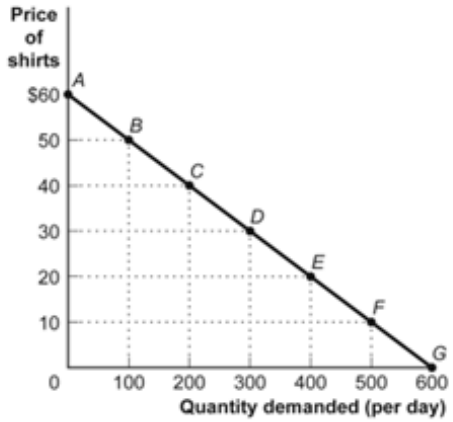

(a) .71
(b) 1
(c) **1.4**
(d) .29

Question 6

Price Elasticity from $4^{th} \rightarrow 6^{th}$

① $\%\Delta Q_d = \dfrac{(60-90)}{\frac{(60+90)}{2}} = \dfrac{-30}{\frac{150}{2}} = -\dfrac{30}{75}$

$\Rightarrow = -\dfrac{6}{15} = -\dfrac{2}{5}$

② $\%\Delta P = \dfrac{(6-4)}{\frac{(6+4)}{2}} = \dfrac{2}{10/2} = \dfrac{2}{5}$

$\Rightarrow \varepsilon_D^1 = \dfrac{-\frac{2}{5}}{\frac{2}{5}} = -1 \Rightarrow = |-1| = 1$

Price Elasticity from $6^{th} \rightarrow 8^{th}$

① $\%\Delta Q_d = \dfrac{(30-60)}{\frac{(60+30)}{2}} = \dfrac{-30}{90/2} = \dfrac{-30}{45} = -\dfrac{2}{3}$

② $\%\Delta P = \dfrac{(8-6)}{\frac{(8+6)}{2}} = \dfrac{2}{14/2} = \dfrac{2}{7}$

$\Rightarrow \varepsilon_D^2 = \dfrac{-2/3}{2/7} = \left|-\dfrac{7}{3}\right| = \dfrac{7}{3}$

Answer is C

$\rightarrow 0 \leq \varepsilon_D^1 \leq \varepsilon_D^2$

Note: Can do it a different way

① **Get Slope:**

⇒ use (60, 6) & (30, 8)

$$\Rightarrow \quad \frac{y_1 - y_0}{x_1 - x_0} = \frac{8-6}{30-60} = -\frac{2}{30} = -\frac{1}{15} = m$$

② **Invert**

$$\Rightarrow \quad \frac{1}{m} = \frac{1}{\left(-\frac{1}{15}\right)} = -15$$

③ Multiply by the ratio of the (x, y) point between the change you are looking for.

⇒ (75, 5) is between (60, 6) & (90, 4)

$$\Rightarrow \quad \varepsilon_D = \left(\frac{1}{m}\right)\frac{P}{Q} = (-15)\frac{5}{75}$$

$$= -\frac{75}{75} = |-1| = 1$$

So, In all, **Do not use this method.**

Always use midpoint method.

$(200, 40) \rightarrow (300, 30)$

Question 10

① $\%\ \Delta Q_d$

$$\Rightarrow \frac{\frac{(300-200)}{\frac{(300+200)}{2}}}{} = \frac{100}{500/2} = \frac{100}{250} = \frac{10}{25} = \frac{2}{5}$$

② $\%\Delta P$

$$\frac{\frac{(30-40)}{\frac{(30+40)}{2}}}{} = \frac{-10}{70/2} = -\frac{10}{35} = -\frac{2}{7}$$

③ E_D

$$\Rightarrow \frac{\left(\frac{2}{5}\right)}{-\left(\frac{2}{7}\right)} = -\frac{7}{5} = |-1.4| = 1.4$$