Market researchers at Chrysler estimated the demand for their new Chrysler Crossfire sports

cars as follows:

*QC* = 1,050,000 - 95*PC* + 14.25*M* + 60*PBMW* + 25*PP*

Where *QC* is the quantity of Chrysler Crossfires sold annually, *PC* is the price of a Chrysler

Crossfire, *M* is average household income, *PBMW* is the price of BMW’s 330i sports sedan,

and *PP* is the price of Porsche’s Boxster S sports car. The marketing team at Chrysler planned

to price the Crossfire at $32,000. They predicted that average household income would be

$75,000 for buyers in the market for their sports sedan. The current prices for BMW’s 330i

and Porsche’s Boxster S was $34,000 and $50,000, respectively. Use this information to

answer the following questions.

a. What was the predicted yearly annual sales of the Chrysler Crossfire?

b. What was the income elasticity of demand for the Chrysler Crossfire? What does your

computed income elasticity say about Crossfire? If average household income was predicted to fall the next year by 2.5 percent (other factors remaining the same), would sales rise or fall? By how much (express your answer in percentage terms)?

c. What was the price elasticity of demand for the Chrysler Crossfire:

d. What was the cross-price elasticity of demand for Chrysler Crossfires

(i). With respect to changes in the price of the BMW 330i?

(ii). With respect to changes in the price of the Porche’s Boxster S?

e. In part *d*, which of the two cross-price elasticities is larger in absolute value? Why do you suppose one is larger than the other?