Chapter 16
Option Valuation

7.  
\[ d_1 = 0.3182 \quad N(d_1) = 0.6248 \]
\[ d_2 = -0.0354 \quad N(d_2) = 0.4859 \]
\[ Xe^{-rT} = 47.56 \]
\[ C = S_0 N(d_1) - Xe^{-rT} N(d_2) = 8.13 \]

8.  
P = $5.69
This value is from our Black-Scholes spreadsheet, but note that we could have derived the value from put-call parity:
\[ P = C - S_0 + PV(X) = 8.13 - 50 + 47.56 = 5.69 \]

10.  
  a.  
  b.  
  c.  
  d.  
  e.  

12. Holding firm-specific risk constant, higher beta implies higher total stock volatility. Therefore, the value of the put option increases as beta increases.