Level 9 Homework

#### B Perpetual American Option

###### b)

// Use global functions.

S = 110, C = 18.5035, P = 3.03106

// Use instances of PerpetualAmericanOption class.

S = 110, C = 18.5035

S = 110, P = 3.03106

###### c)

// Compute prices for a range of underlying value

S = 10, C = 10, P = 0.00148148

S = 11, C = 11, P = 0.00122436

S = 12, C = 12, P = 0.00102881

S = 13, C = 13, P = 0.000876616

S = 14, C = 14, P = 0.000755858

S = 15, C = 15, P = 0.000658436

S = 16, C = 16, P = 0.000578704

S = 17, C = 17, P = 0.000512623

S = 18, C = 18, P = 0.000457247

S = 19, C = 19, P = 0.000410383

S = 20, C = 20, P = 0.00037037

S = 21, C = 21, P = 0.000335937

S = 22, C = 22, P = 0.000306091

S = 23, C = 23, P = 0.000280053

S = 24, C = 24, P = 0.000257202

S = 25, C = 25, P = 0.000237037

S = 26, C = 26, P = 0.000219154

S = 27, C = 27, P = 0.000203221

S = 28, C = 28, P = 0.000188964

S = 29, C = 29, P = 0.000176157

S = 30, C = 30, P = 0.000164609

S = 31, C = 31, P = 0.00015416

S = 32, C = 32, P = 0.000144676

S = 33, C = 33, P = 0.000136041

S = 34, C = 34, P = 0.000128156

S = 35, C = 35, P = 0.000120937

S = 36, C = 36, P = 0.000114312

S = 37, C = 37, P = 0.000108216

S = 38, C = 38, P = 0.000102596

S = 39, C = 39, P = 9.74018e-005

S = 40, C = 40, P = 9.25926e-005

S = 41, C = 41, P = 8.8131e-005

S = 42, C = 42, P = 8.39842e-005

S = 43, C = 43, P = 8.01234e-005

S = 44, C = 44, P = 7.65228e-005

S = 45, C = 45, P = 7.31596e-005

S = 46, C = 46, P = 7.00133e-005

S = 47, C = 47, P = 6.70657e-005

S = 48, C = 48, P = 6.43004e-005

S = 49, C = 49, P = 6.17027e-005

S = 50, C = 50, P = 5.92593e-005