2.1. TRUE/FALSE QUESTIONS.

**Problem 2.1.** *Source: Sample FM(DM) Problem #24.*
Derivatives are used to reduce the likelihood of bankruptcy.

**Problem 2.2.** *Source: Sample FM(DM) Problem #24.*
Derivatives are used to reduce transaction costs.

**Problem 2.3.** *Source: Sample FM(DM) Problem #24.*
Derivatives are used to satisfy regulatory, tax, and accounting constraints.

**Problem 2.4.** *Source: Sample FM(DM) Problem #24.*
Derivatives are used as a form of insurance.

2.2. MULTIPLE CHOICE QUESTIONS.

**Problem 2.5.** The spot price of the market index is $900. After 3 months the market index is priced at $920.
An investor has a long call option on the index at a strike price of $930. After 3 months what is the investor’s payoff?
(a) $10 loss
(b) $0
(c) $10 gain
(d) $20 gain
(e) None of the above.

**Problem 2.6.** The premium on a 2-month call option on the market index with an exercise price of 1050 is $9.30 when originally purchased. After 2 months the position is closed and the index spot price is 1072. If interest rates are 0.5% effective per month, what is the call profit?
(a) $9.30
(b) $9.39
(c) $12.61
(d) $22.00
(e) None of the above.

**Problem 2.7.** A strategy consists of buying a market index product at $830 and longing a put on the index with a strike of $830. The put premium is $18.00 and interest rates are 0.5% effective per month. Compute the profit this position in 6 months if the market index is worth $810 at time 6 months.
(a) $45.21 loss
(b) $21.22 loss
(c) $18.00 gain
(d) $24.25 gain
(e) None of the above.