

Solution 1.50

For the following five spreadsheet functions, (a) write the values of the engineering economy symbols P , F , A , i , and n , using a ? for the symbol that is to be determined, and (b) state whether the displayed answer will have a positive sign, a negative sign, or it can't be determined from the entries.

$$(1) = \text{FV}(8\%, 10, 3000, 8000)$$

$$(2) = \text{PMT}(12\%, 20, -16000)$$

$$(3) = \text{PV}(9\%, 15, 1000, 600)$$

$$(4) = \text{NPER}(10\%, -290, 12000)$$

$$(5) = \text{FV}(5\%, 5, 500, -2000)$$

Solution:

- (a)
- (1) $F = ?$; $i = 8\%$; $n = 10$; $A = \$3000$; $P = \$8000$
 - (2) $A = ?$; $i = 12\%$; $n = 20$; $P = \$-16,000$; $F = 0$
 - (3) $P = ?$; $i = 9\%$; $n = 15$; $A = \$1000$; $F = \$600$
 - (4) $n = ?$; $i = 10\%$; $A = \$-290$; $P = 0$; $F = \$12,000$
 - (5) $F = ?$; $i = 5\%$; $n = 5$; $A = \$500$; $P = \$-2000$

- (b)
- (1) negative
 - (2) positive
 - (3) negative
 - (4) positive (years)
 - (5) can't determine if 5% per year will cover the 5 withdrawals of \$500