Exercise E26-11
page 1223

(a) payback period = $\frac{\text{expenditure}}{\text{net cash flow}}$

$= \frac{\$15,000+\$2,900+\$820}{(4x52)x(65-35-10)}$

$= \frac{\$18,720}{\$\ 4,160}$

= 4.5 years

(b) rate of return = $\frac{\text{annual net income}}{\text{average investment}}$

$= \frac{\$4,160 - \$3,528}{(\$18,720+1,080)\div 2}$

$= \frac{\$632}{\$9,900}$

= 6.4%

Exercise E26-12
page 1223

(a) payback period = $\frac{\text{expenditure}}{\text{net cash flow}}$

Project AA

7,000 + 9,000 + (22,000 - 16000) = 2+ yrs

$\frac{6{,}000}{15{,}000} = .4$ = .4

= 2.4 yrs

Project BB

$\frac{\$22{,}000}{\$28{,}500 \div 3} =$ 2.32 years

Project CC

13,000 + (22,000 - 13,000) = 1+ yr

$\frac{9{,}000}{10{,}000}$ = .9 yr

= 1.9 yr

Exercise E26-12
(continued)

		A A		B B		C C	
Year	Disc Factor	Cash Inflow	Present Value	Cash Inflow	Present Value	Cash Inflow	Present Value
1	.89286	7,000	6,250	9,500	8,482	13,000	11,607
2	.79719	9,000	7,175	9,500	7,573	10,000	7,972
3	.71178	15,000	10,677	9,500	6,762	9,000	6,406
	Total PV		24,102		22,817		25,985
	Inv		22,000		22,000		22,000
	Net PV		$ 2,102		$ 817		$ 3,985

Exercise E26-13
page 1223

(a)

(1) rate of return = $\frac{\text{annual net income}}{\text{average investment}}$

$= \frac{\$18,000}{(\$150,000 \div 2)}$

$= \frac{\$18,000}{\$75,000}$

= 24%

(2) payback period = $\frac{\text{expenditure}}{\text{net cash flow}}$

$= \frac{\$150,000}{\$48,000}$

= 3.13 years

Exercise E26-13
(continued)

Year	PV Factor	Cash Flow	PV of CF
1	.89286	48,000	42,857
2	.79719	48,000	38,265
3	.71178	48,000	34,165
4	.63552	48,000	30,505
5	.56743	48,000	27,237
	Total		173,029
	Investment		150,000
	Excess		$ 23,029

Alternate (since even streams of cash):

Annuity factor	x	NCF	=	PV of all CF
3.60478	x	$48,000	=	$173,029
Investment			)	150,000
Excess				$ 23,029

Brief Exercise BE26-9
page 1108

$$\text{payback period} = \frac{\text{expenditure}}{\text{net cash flow}}$$

$$= \frac{\$300,000}{\$10,000 + \$30,000}$$

$$= 7.5 \text{ years}$$

Brief Exercise BE26-13
page 1219

Annuity factor	x	NCF	=	PV of all CF
6.71	x	$34,000	=	$228,140
Investment			)	225,000
Excess				$ 3,140