Exercise 14-2 (30 minutes)

1. Annual savings in part-time help $3,800
   Added contribution margin from expanded sales
   (1,000 dozen × $1.20 per dozen) 1,200
   Annual cash inflows $5,000

2. $$\text{Factor of the internal rate of return} = \frac{\text{Investment required}}{\text{Annual cash inflow}}$$

$$= \frac{\$18,600}{\$5,000} = 3.720$$

   Looking in Exhibit 14B-2, and scanning along the six-period line, we can see that a factor of 3.720 falls closest to the 16% rate of return.

3. The cash flows will not be even over the six-year life of the machine because of the extra $9,125 inflow in the sixth year. Therefore, the above approach cannot be used to compute the internal rate of return in this situation. Using trial-and-error or some other method, the internal rate of is 22%:

Item	*Year(s)*	*Amount of Cash Flows*	*22% Factor*	*Present Value of Cash Flows*
Initial investment.....	Now	$(18,600)	1.000	$(18,600)
Annual cash inflows .	1-6	$5,000	3.167	15,835
Salvage value.....	6	$9,125	0.303	2,765
Net present value				$ 0