

Week	1	2	3	4	5
Demand (simple)	40	60	80	100	100
Demand (complex)	10	17	21	30	20

- Determine the total profit that would result from having enough accountants to meet demand each week.
- Find a more profitable arrangement in which all forms will be completed by the end of the fifth week but it is not required to complete all filings in the same week in which they were demanded.
- If one or more permanent accountants will work up to an additional 40 hours overtime per week at 1.5 times the regular pay rate for the overtime hours worked, how will that change your solution to part b?
- Are there any limitations or assumptions in your answers to parts a, b, and c that might affect the decisions regarding whom and when to hire or lay off?

Solution

The revenue and permanent employee costs are the same for all the solutions, and so they are shown here once:

Week	1	2	3	4	5
Revenue					
Simple returns	2000	3000	4000	5000	5000
Complex returns	<u>2000</u>	<u>3400</u>	<u>4200</u>	<u>6000</u>	<u>4000</u>
Total revenues	4000	6400	8200	11,000	9000
Costs of 5 permanent employees:					
Accountants	3000	3000	3000	3000	3000
Computer system	<u>875</u>	<u>875</u>	<u>875</u>	<u>875</u>	<u>875</u>
Permanent costs	3875	3875	3875	3875	3875

a. First, the number of total accountants needed is computed as follows:

Number of accountants:	2.00	3.00	4.00	5.00	5.00
Simple forms	2.00	3.00	4.00	5.00	5.00
Complex forms	<u>2.50</u>	<u>4.25</u>	<u>5.25</u>	<u>7.50</u>	<u>5.00</u>
	4.50	7.25	9.25	12.50	10.00
Round-up total	5	8	10	13	10

To determine the number of temporary accountants, subtract five permanent accountants from the round-up total.

Costs of Temporary Accountants					
Number of Temps	0	3	5	8	5
Hiring fees	0	600	400	600	0
Accountants (pay)	0	1800	3000	4800	3000
Computer system	<u>0</u>	<u>525</u>	<u>875</u>	<u>1400</u>	<u>875</u>
Temporary costs	0	2925	4275	6800	3875
Permanent costs	<u>3875</u>	<u>3875</u>	<u>3875</u>	<u>3875</u>	<u>3875</u>
Total costs	3875	6800	8150	10,675	7750
Total revenue	4000	6400	8200	11,000	9000
Profit (loss)	125	(400)	50	325	1250

Five-week profit (loss) = \$1,350