

1)

- CVP, movie production.** Royal Rumble Productions has just finished production of *Feature Creatures*, the latest action film directed by Tony Savage and starring Ralph Michaels and Sally Martel. The total production cost to Royal Rumble was \$5 million. All the production personnel and actors on *Feature Creatures* received a fixed salary (included in the \$5 million) and will have no “residual” (equity interest) in the revenues or operating income from the movie. Media Productions will handle the marketing of *Feature Creatures*. Media agrees to invest a minimum \$3 million of its own money in marketing the movie and will be paid 20% of the revenues Royal Rumble itself receives from the box office receipts. Royal Rumble receives 62.5% of the total box office receipts (out of which comes the 20% payment to Media Productions).

REQUIRED

1. What is the breakeven point to Royal Rumble for *Feature Creatures* expressed in terms of (a) revenues received by Royal Rumble and (b) total box office receipts?
2. Assume in its first year of release, the box office receipts for *Feature Creatures* total \$300 million. What is the operating income to Royal Rumble from the movie in its first year?

1

2)

Job costing, law firm. Keating & Partners is a law firm specializing in labour relations and employee-related work. It employs 25 professionals (5 partners and 20 managers) who work directly with its clients. The average budgeted total compensation per professional for 19_6 is \$104,000. Each professional is budgeted to have 1,600 billable hours to clients in 19_6. Keating is a highly respected firm, and all professionals work for clients to their maximum 1,600 billable hours available. All professional labour costs are included in a single direct cost category and are traced to jobs on a per-hour basis.

All costs of Keating & Partners other than professional labour costs are included in a single indirect cost pool (legal support) and are allocated to jobs using professional labour-hours as the allocation base. The budgeted level of indirect costs in 19_6 is \$2.2 million.

REQUIRED

1. Present an overview diagram of Keating's job costing system.
2. Compute the 19_6 budgeted professional labour hour direct cost rate.
3. Compute the 19_6 budgeted indirect cost rate per hour of professional labour.
4. Keating & Partners is considering bidding on two jobs:
 - a. Litigation work for Richardson, Inc. that requires 100 budgeted hours of professional labour
 - b. Labour contract work for Punch, Inc. that requires 150 budgeted hours of professional labour

Prepare a cost estimate for each job.

3)

- 4 **ABC, product cost cross-subsidization.** PEI Potatoes processes potatoes into potato cuts at its highly automated plant. For many years, it processed potatoes for only the retail consumer market where it had a superb reputation for quality. Recently, it started selling potato cuts to the institutional market that includes hospitals, cafeterias, and university dormitories. Its penetration into the institutional market has been slower than predicted.

PEI's existing costing system has a single direct cost category (direct materials, which are the raw potatoes) and a single indirect cost pool (production support). Support costs are allocated on the basis of kilograms of potato cuts processed. Support costs include packaging material. The 19_7 total actual costs for producing 1,000,000 kilograms of potato cuts (900,000 for the retail market and 100,000 for the institutional market) are:

Direct materials used	\$150,000
Production support	983,000

The existing costing system does not distinguish between potato cuts produced for the retail or the institutional markets.

At the end of 19_7, PEI unsuccessfully bid for a large institutional contract. Its bid was reported to be 30% above the winning bid. This came as a shock, as PEI included only a minimum profit margin on its bid. Moreover, the PEI plant was widely acknowledged as the most efficient in the industry.

As part of its lost contract bid review process, PEI decided to explore several ways of refining its costing system. First, it identified that \$188,000 of the \$983,000 pertains to packaging materials that could be traced to individual jobs (\$180,000 for retail and \$8,000 for institutional). These will now be classified as a direct material. The \$150,000 of direct materials used were classified as \$135,000 for retail and \$15,000 for institutional. Second, it used activity-based costing (ABC) to examine how the two products (retail potato cuts and institutional potato cuts) used the support area differently. The finding was that three activity areas could be distinguished and that different usage occurred in two of these three areas. The indirect cost per kilogram of finished product at each activity area is as follows:

Activity Area	Retail Potato Cuts	Institutional Potato Cuts
Cleaning	\$0.120	\$0.120
Cutting	0.240	0.150
Packaging	0.480	0.120

There was no beginning or ending amount of any inventory (materials, work in process, or finished goods).

REQUIRED

1. Using the current costing system, what is the cost per kilogram of potato cuts produced by PEI?
2. Using the refined costing system, what is the cost per kilogram of (a) retail market potato cuts and (b) institutional market potato cuts?
3. Comment on the cost differences shown between the two costing systems in requirements 1 and 2. How might PEI use the information in requirement 2 to make better decisions?

4)

Allocating costs of support departments; dual rates; direct, step-down, and reciprocal methods. Magnum T.A., Inc. specializes in the assembly and installation of high-quality security systems for the home and business segments of the market. The four departments at its highly automated state-of-the-art assembly plant are as follows:

Service Departments	Assembly Departments
Engineering Support	Home Security Systems
Information Systems Support	Business Security Systems

The budgeted level of service relationships at the start of the year was:

Supplied By:	Used By:			
	Engineering Support	Information Systems Support	Home Security Systems	Business Security Systems
Engineering Support	—	0.10	0.40	0.50
Information Systems Support	0.20	—	0.30	0.50

The actual level of service relationships for the year was:

Supplied By:	Used By:			
	Engineering Support	Information Systems Support	Home Security Systems	Business Security Systems
Engineering Support	—	0.15	0.30	0.55
Information Systems Support	0.25	—	0.15	0.60

Magnum collects fixed costs and variable costs of each department in separate cost pools. The actual costs (in thousands) in each pool for the year were:

	Fixed-Cost Pool	Variable-Cost Pool
Engineering Support	\$2,700	\$8,500
Information Systems Support	8,000	3,750

Fixed costs are allocated on the basis of the budgeted level of service. Variable costs are allocated on the basis of the actual level of service.

The support department costs allocated to each assembly department are allocated to products on the basis of units assembled. The units assembled in each department during the year were:

Home Security Systems	7,950 units
Business Security Systems	3,750 units

REQUIRED

1. Allocate the support department costs to the assembly departments using a dual-rate system and (a) the direct method, (b) the step-down method (allocate Information Systems Support first), (c) the step-down method (allocate Engineering Support first),
2. Compare the support department costs allocated to each Home Security Systems unit assembled and each Business Security Systems unit assembled under (a), (b), (c),
3. What factors might explain the very limited adoption of the reciprocal method by many organizations?