**10-5:** (Payback period, NPV, PI, and IRR calculations) You are considering a project with an initial cash outlay of $80,000 and expected free cash flows of 20,000 at the end of each year for 6 years. The required rate of return for this project is 10 percent.

1. What is the project’s payback period?
2. What is the project’s NPV?
3. What is the project’s PI?
4. What is the project’s IRR?

**10-16:** (PI calculation) Calculate the PI given the following cash flows if the appropriate required rate of return is 10%.

Year Cash Flows

1. - 55,000
2. 10,000
3. 10,000
4. 10,000
5. 10,000
6. 10,000
7. 10,000

Should the project be accepted? Without calculating the NPV, do you think it would be positive or negative? Why?

**10-29:** (Capital rationing) The Cowboy Hat Company of Stillwater, Oklahoma, is considering seven capital investment proposals for which the total funds available are limited to a maximum of $12 million. The projects are independent and have the following costs and profitability indexes associated with them:

Project Cost Profitability Index

A $ 4,000,000 1.18

B $ 3,000,000 1.08

C $ 5,000,000 1.33

D $ 6,000,000 1.31

E $ 4,000,000 1.19

F $ 6,000,000 1.20

G $ 4,000,000 1.18

1. Under strict capital rationing, which projects should be selected?
2. What problems are there with capital rationing?