**Problem 10-21**   
Payback, NPV, and MIRR

Your division is considering two investment projects, each of which requires an up-front expenditure of $28 million. You estimate that the cost of capital is 8% and that the investments will produce the following after-tax cash flows (in millions of dollars):

|  |  |  |
| --- | --- | --- |
| **Year** | **Project A** | **Project B** |
| 1 | 5 | 20 |
| 2 | 10 | 10 |
| 3 | 15 | 8 |
| 4 | 20 | 6 |

1. What is the regular payback period for each of the projects? Round your answers to two decimal places.   
     
   Project A  years   
     
   Project B  years

1. What is the discounted payback period for each of the projects? Round your answers to two decimal places.   
     
   Project A  years   
     
   Project B  years

1. If the two projects are independent and the cost of capital is 8%, which project or projects should the firm undertake?  
   

1. If the two projects are mutually exclusive and the cost of capital is 5%, which project should the firm undertake?  
   

1. If the two projects are mutually exclusive and the cost of capital is 15%, which project should the firm undertake?  
   

1. What is the crossover rate? Round your answer to two decimal places.  
    %

1. If the cost of capital is 8%, what is the modified IRR (MIRR) of each project? Round your answers to two decimal places.   
     
   Project A  %   
     
   Project B  %