Siva, Inc., imposes a payback cutoff of three years for its international investment projects.

Year	Cash Flow (A)	Cash Flow (B)
0	–$ 68,000	–$ 78,000
1	27,000	19,000
2	36,000	22,000
3	25,000	34,000
4	12,000	238,000

What is the payback period for both projects? **(Round your answers to 2 decimal places, e.g., 32.16.)**

	Payback period	
Project A		years
Project B		years

Which project should the company accept?

- ○ Project A
- ○ Project B

An investment project costs $10,000 and has annual cash flows of $2,830 for six years.

What is the discounted payback period if the discount rate is zero percent? **(Enter 0 if the project never pays back. Round your answer to 2 decimal places, e.g., 32.16.)**

Discounted payback period		years

What is the discounted payback period if the discount rate is 4 percent? **(Enter 0 if the project never pays back. Round your answer to 2 decimal places, e.g., 32.16.)**

Discounted payback period		years

What is the discounted payback period if the discount rate is 21 percent? **(Enter 0 if the project never pays back. Round your answer to 2 decimal places, e.g., 32.16.)**

Discounted payback period		years

You're trying to determine whether to expand your business by building a new manufacturing plant. The plant has an installation cost of $12.7 million, which will be depreciated straight-line to zero over its four-year life. If the plant has projected net income of $1,924,300, $1,977,600, $1,946,000, and $1,399,500 over these four years, what is the project's average accounting return (AAR)? **(Do not round intermediate calculations. Enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**

Average accounting return		%

A firm evaluates all of its projects by applying the IRR rule. A project under consideration has the following cash flows:

Year	Cash Flow
0	–$ 28,900
1	12,900
2	15,900
3	11,900

If the required return is 14 percent, what is the IRR for this project? **(Do not round intermediate calculations. Enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**

IRR _____ %

Should the firm accept the project?

- ○ Yes
- ○ No

A firm evaluates all of its projects by applying the NPV decision rule. A project under consideration has the following cash flows:

Year	Cash Flow
0	–$27,600
1	11,600
2	14,600
3	10,600

What is the NPV for the project if the required return is 10 percent? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

NPV $ [ ]

At a required return of 10 percent, should the firm accept this project?

- ○ Yes
- ○ No

What is the NPV for the project if the required return is 26 percent? **(Negative amount should be indicated by a minus sign. Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

NPV $ [ ]

At a required return of 26 percent, should the firm accept this project?

- ○ Yes
- ○ No

What is the IRR of the following set of cash flows? **(Do not round intermediate calculations. Enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**

Year	Cash Flow
0	–$16,100
1	6,800
2	8,100
3	6,600

IRR [ ] %

A project has the following cash flows:

Year	Cash Flow
0	–$16,200
1	6,900
2	8,200
3	6,700

What is the NPV at a discount rate of zero percent? **(Do not round intermediate calculations and round your answer to the nearest whole number, e.g., 32.)**

NPV $ ____

What is the NPV at a discount rate of 10 percent? **(Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

NPV $ ____

What is the NPV at a discount rate of 20 percent? **(Negative amount should be indicated by a minus sign. Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

NPV $ ____

What is the NPV at a discount rate of 30 percent? **(Negative amount should be indicated by a minus sign. Do not round intermediate calculations and round your answer to 2 decimal places, e.g., 32.16.)**

NPV $ ____

Garage, Inc., has identified the following two mutually exclusive projects:

Year	Cash Flow (A)	Cash Flow (B)
0	–$ 29,900	–$ 29,900
1	15,300	4,750
2	13,200	10,250
3	9,650	16,100
4	5,550	17,700

a-1 What is the IRR for each of these projects? **(Do not round intermediate calculations. Enter your answers as a percent rounded to 2 decimal places, e.g., 32.16.)**

	IRR	
Project A		%
Project B		%

a-2 Using the IRR decision rule, which project should the company accept?

- Project A
- Project B

a-3 Is this decision necessarily correct?

- Yes
- No

b-1 If the required return is 11 percent, what is the NPV for each of these projects? **(Do not round intermediate calculations and round your answers to 2 decimal places, e.g., 32.16.)**

		NPV
Project A	$	
Project B	$	

b-2 Which project will the company choose if it applies the NPV decision rule?

- Project A
- Project B

c. At what discount rate would the company be indifferent between these two projects? **(Do not round intermediate calculations. Enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**

Discount rate		%

Year	Cash Flow
0	–$ 17,200
1	9,500
2	8,400
3	4,900

What is the profitability index for the set of cash flows if the relevant discount rate is 10 percent? **(Do not round intermediate calculations and round your answer to 3 decimal places, e.g., 32.161.)**

Profitability index

What is the profitability index for the set of cash flows if the relevant discount rate is 15 percent? **(Do not round intermediate calculations and round your answer to 3 decimal places, e.g., 32.161.)**

Profitability index

What is the profitability index for the set of cash flows if the relevant discount rate is 22 percent? **(Do not round intermediate calculations and round your answer to 3 decimal places, e.g., 32.161.)**

Profitability index

Consider the following two mutually exclusive projects:

Year	Cash Flow (A)	Cash Flow (B)
0	–$ 355,000	–$ 47,500
1	40,000	23,500
2	60,000	21,500
3	60,000	19,000
4	435,000	14,100

Whichever project you choose, if any, you require a 15 percent return on your investment.

a-1 What is the payback period for each project? **(Do not round intermediate calculations and round your answers to 2 decimal places, e.g., 32.16.)**

	Payback period	
Project A		years
Project B		years

a-2 If you apply the payback criterion, which investment will you choose?

- Project A
- Project B

b-1 What is the discounted payback period for each project? **(Do not round intermediate calculations and round your answers to 2 decimal places, e.g., 32.16.)**

	Discounted payback period	
Project A		years
Project B		years

b-2 If you apply the discounted payback criterion, which investment will you choose?

- Project A
- Project B

c-1 What is the NPV for each project? **(Do not round intermediate calculations and round your answers to 2 decimal places, e.g., 32.16.)**

	NPV	
Project A	$	
Project B	$	

c-2 If you apply the NPV criterion, which investment will you choose?

- Project A
- Project B

d-1 What is the IRR for each project? **(Do not round intermediate calculations. Enter your answers as a percent rounded to 2 decimal places, e.g., 32.16.)**

	IRR	
Project A		%
Project B		%

d-2 If you apply the IRR criterion, which investment will you choose?

- Project A
- Project B

e-1 What is the profitability index for each project? **(Do not round intermediate calculations and round your answers to 3 decimal places, e.g., 32.161.)**

	Profitability index
Project A	
Project B	

e-2 If you apply the profitability index criterion, which investment will you choose?

- Project A
- Project B

f. Based on your answers in (a) through (e), which project will you finally choose?

(Click to select) ▼

An investment has an installed cost of $537,800. The cash flows over the four-year life of the investment are projected to be $212,750, $229,350, $196,010, and $144,720.

If the discount rate is zero, what is the NPV? **(Do not round intermediate calculations.)**

NPV $ ____

If the discount rate is infinite, what is the NPV? **(Negative amount should be indicated by a minus sign.)**

NPV $ ____

At what discount rate is the NPV just equal to zero? **(Do not round intermediate calculations. Enter your answer as a percent rounded to 2 decimal places, e.g., 32.16.)**

IRR ____ %