

## Review – Cash flow diagram

13. A laser cutting machine is purchased today for \$23,000. There are no maintenance costs for the next two years. Maintenance at the end of year 3 is expected to be \$2,000, with each subsequent year's maintenance costs exceeding the previous year's by \$1,000. A revenue of \$14,000 per year is expected. The planning horizon is 6 years. Draw the cash flow diagram.

## Review

14. You rent an apartment for \$550 per month, payable at the beginning of the month. An initial deposit of \$450 is required. Utilities are an additional \$150 per month payable at the end of the month. The deposit is refundable at the time you move out, assuming a clean apartment in good condition. Draw a monthly cash flow diagram, assuming you keep the apartment for 12 full months.

## Review– Calculation

15. How much money would have to be deposited today to accumulate:

- a. \$10,000 after 6 years if the investment earns 5%/year compounded annually?
- b. \$6,500 after 4 years if the investment earns 8%/year compounded annually?
- c. \$3,400 after 12 years if the investment earns 6%/year compounded annually?
- d. \$13,500 after 5 years if the investment earns 10%/year compounded annually?

## Review

16. The cash flow profile for an investment is given below and the interest rate is 6.5% compounded annually. Find the present worth and future worth of this cash flow series.

End of Year	Net Cash Flow	End of Year	Net Cash Flow
0	\$0	4	-\$300
1	-\$500	5	\$500
2	\$200	6	-\$200
3	\$400	7	\$100

## Review

17. Jason has been making equal annual payments of \$7,500 to repay a college loan. He wishes to pay off the loan immediately after having made an annual payment. He has eight payments remaining. With an annual compound interest rate of 6%, how much should Jason pay?

## Review

18. On Juan's 26th birthday, he deposited \$7,500 in a retirement account. Each year thereafter he deposited \$1,000 more than the previous year. Determine how much was in the account immediately after his 35th deposit if :

- a. The account earned annual compound interest of 5%.
- b. The account earned annual compound interest of 6%.

## Review

19. Suppose you make 30 annual investments in a fund that pays 5% compounded annually. If your first deposit is \$7,500 and each successive deposit is 5% greater than the preceding deposit, how much will be in the fund immediately after the 30th deposit?

## Review

20. A refrigerator sold for \$500. The store financed the refrigerator by charging 0.5% monthly interest on the unpaid balance. If the refrigerator is paid for with 30 equal end-of-month payments:

- a. What will be the size of the monthly payments?
- b. If the first payment is not made until one year after the purchase, what will be the size of the monthly payments?