

You need Scantron 882E. Be sure your Scantron is *clean* and *not folded* when you submit.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Find the interest. Round to the nearest cent.

- 1) \$530 at 15% for $2\frac{1}{2}$ years 1) _____
A) Interest = \$198.75 B) Interest = \$88.33
C) Interest = \$19.88 D) Interest = \$31.80
- 2) \$2180 at 15% for 22 months 2) _____
A) Interest = \$14.86 B) Interest = \$59,950.00
C) Interest = \$7194.00 D) Interest = \$599.50

Find the exact interest. Use 365 days in a year, and use the exact number of days in a month. Round to the nearest cent, if necessary.

- 3) \$1300 at 10% for 114 days 3) _____
A) \$41.17 B) \$4.06 C) \$4.12 D) \$40.60
- 4) \$7940 at $14\frac{1}{2}$ % for 66 days 4) _____
A) \$201.00 B) \$211.07 C) \$1151.30 D) \$208.18
- 5) A loan of \$97,000 at 13% made on Feb 18 and due on June 30 5) _____
A) \$4728.75 B) \$4560.33 C) \$4663.97 D) \$4623.67

Find the present value of the future amount. Assume 365 days in a year. Round to the nearest cent.

- 6) \$200 for 4 months; money earns 2% 6) _____
A) \$1.32 B) \$196.08 C) \$198.68 D) \$199.00
- 7) \$15,000 for 110 days; money earns 8% 7) _____
A) \$13,888.89 B) \$14,650.01 C) \$14,646.87 D) \$353.13
- 8) \$1200 for 315 days; money earns 7% 8) _____
A) \$1121.50 B) \$1131.84 C) \$1131.64 D) \$68.36

Find the proceeds. Assume 365 days in a year. Round to the nearest cent.

- 9) \$20,000; discount rate 7%;
length of loan 4 months 9) _____
A) \$18,600.00 B) \$466.67 C) \$19,650.00 D) \$19,533.33
- 10) \$9110; discount rate 13%;
length of loan 10 months 10) _____
A) \$7925.70 B) \$8221.78 C) \$8123.08 D) \$986.92
- 11) \$483; discount rate 14.9%;
length of loan 11 months 11) _____
A) \$417.03 B) \$411.03 C) \$423.03 D) \$65.97

- 12) \$3360; discount rate 8%; length of loan 178 days 12) _____
 A) \$3228.91 B) \$3229.65 C) \$131.09 D) \$3091.20

Find the actual interest rate paid, to the nearest tenth, on the simple discount note.

- 13) \$4800; discount rate 5%; length of loan 9 mo 13) _____
 A) 5.2% B) 6.2% C) 7.2% D) 4.2%
- 14) \$4000; discount rate 5.5%; length of loan 4 mo 14) _____
 A) 6.6% B) 5.6% C) 7.6% D) 4.6%
- 15) \$29,000; discount rate 9.0%; length of loan 8 mo 15) _____
 A) 11.6% B) 9.6% C) 8.6% D) 10.6%
- 16) \$30,000; discount rate 6%; length of loan 3 mo 16) _____
 A) 5.1% B) 7.1% C) 6.1% D) 8.1%
- 17) \$49,000; discount rate 5%; length of loan 6 mo 17) _____
 A) 7.1% B) 5.1% C) 6.1% D) 4.1%

Solve the problem.

- 18) How much must Harry's Hardware deposit at 14.5% interest for 240 days in order to earn \$500.00 interest? 18) _____
 A) \$5244 B) \$2586 C) \$5172 D) \$3448
- 19) Novelties-and-Such borrowed \$7100 for 75 days and paid \$182.36 in interest. Find the rate of interest on the loan. 19) _____
 A) 13.0% B) 12.5% C) 12.7% D) 12.0%
- 20) Allan borrowed \$5800 from his father to buy a car. He repaid him after 10 months with interest of 4%. Find the total amount he repaid. 20) _____
 A) \$5974.00 B) \$6032.00 C) \$193.33 D) \$5993.33
- 21) Tuition of \$2600 is due when the spring term begins, in 9 months. What amount should a student deposit today, at 6%, to have enough to pay tuition? 21) _____
 A) \$2500.00 B) \$2488.04 C) \$2452.83 D) \$111.96
- 22) Ted owes \$14,000 to Mary. The loan is payable in 1 year at 10%. Mary needs cash, so 4 months before the loan is payable she goes to her bank which will pay her the maturity value of the note less a 14% discount fee. Find the amount Mary will receive. 22) _____
 A) \$14,681.33 B) \$14,501.67 C) \$718.67 D) \$13,962.67
- 23) A company has ordered 15 new personal computers at a cost of \$1900 each. They will not be delivered for 4 months. What amount should the firm deposit in an account paying 7.32% to have enough money to pay for them? 23) _____
 A) \$14,078.25 B) \$27,821.16 C) \$27,656.48 D) \$27,987.82

Find the compound amount for the deposit. Round to the nearest cent.

- 24) \$1920 at 6% compounded annually for 20 years 24) _____
 A) \$5809.15 B) \$4108.80 C) \$4224.00 D) \$6157.70

- 25) \$6390 at 9% compounded semiannually for 6 years 25) _____
A) \$9840.60 B) \$8321.44 C) \$10,716.67 D) \$10,836.68

Find the compound interest earned by the deposit. Round to the nearest cent.

- 26) \$6000 at 6% compounded quarterly for $\frac{1}{2}$ year 26) _____
A) \$741.60 B) \$720.00 C) \$177.38 D) \$181.35

- 27) \$20,625 at 12% compounded continuously for 5 years 27) _____
A) \$37,581.20 B) \$13,377.58 C) \$37,577.49 D) \$14,353.97

Find the effective rate corresponding to the given nominal rate. Round results to the nearest 0.01 percentage points.

- 28) 11% compounded semiannually 28) _____
A) 11.46% B) 11.57% C) 11.00% D) 11.30%

- 29) 15% compounded quarterly 29) _____
A) 15.00% B) 15.56% C) 16.08% D) 15.87%

- 30) 3% compounded monthly 30) _____
A) 0.43% B) 3.04% C) 2.03% D) 3.02%

- 31) 12% compounded monthly 31) _____
A) 2.90% B) 12.36% C) 12.68% D) 12.55%

Find the amount that should be invested now to accumulate the following amount, if the money is compounded as indicated.

- 32) \$19,000 at 9% compounded semiannually for 9 yr 32) _____
A) \$41,961.10 B) \$8748.13 C) \$10,396.79 D) \$8603.21

- 33) \$6600 at 6% compounded quarterly for 4 yr 33) _____
A) \$5227.82 B) \$1399.00 C) \$8375.30 D) \$5201.00

Solve the problem. Round to the nearest cent.

- 34) If inflation is 4% a year compounded annually, what will it cost in 23 years to buy a house 34) _____
currently valued at \$52,000?
A) \$133,291.82 B) \$128,165.21 C) \$81,998.76 D) \$123,235.78

- 35) June made an initial deposit of \$5400 in an account for her son. Assuming an interest rate of 8% 35) _____
compounded quarterly, how much will the account be worth in 14 years?
A) \$9589.56 B) \$16,193.00 C) \$16,047.35 D) \$16,368.29

- 36) A small company borrows \$87,000 at 6% compounded monthly. The loan is due in 3 years. How 36) _____
much interest will the company pay?
A) \$16,593.24 B) \$17,018.78 C) \$17,111.21 D) \$104,111.21

- 37) John Lee's savings account has a balance of \$1736. After 7 years, what will the amount of interest 37) _____
be at 6% compounded semiannually?
A) \$874.30 B) \$399.06 C) \$729.12 D) \$889.86

38) Andrea Gilford's savings account has a balance of \$4639. After 6 years, what will the amount of interest be at 10% compounded quarterly? 38) _____
A) \$3751.68 B) \$3742.68 C) \$231.95 D) \$3756.68

39) Barry Newman's savings account has a balance of \$4502. After 11 years, what will the amount of interest be at 4% compounded annually? 39) _____
A) \$2419.62 B) \$2428.62 C) \$1800.80 D) \$2433.62

Solve the problem.

40) A bank gives you two options to choose from for your investments: 40) _____
Option A: 8% annual interest rate compounded yearly; and
Option B: 7.9% annual interest rate compounded quarterly.
Decide which is the better investment at the end of 2 years.
A) Option A B) Option B

41) Mark and Kate are establishing a fund for their son's college education. What lump sum must they deposit in an account that gives 8% annual interest rate, compounded monthly, in order for them to have \$60,000 in the fund at the end of 10 years? 41) _____
A) \$27,031.41 B) \$31,607.41 C) \$28,331.41 D) \$29,351.41

42) James purchased a bond for \$3200, and ten months later he sold it for \$3700. What annual rate would he have to earn in a savings account compounded monthly, to earn the same money on his investment? 42) _____
A) 18.3% B) 17.55% C) 19.05% D) 19.55%

43) Anne purchased a bond for a museum valued at \$8000 for \$2400. If the bond pays 5.5% annual interest compounded monthly, how long must she hold it until it reaches its full face value? 43) _____
A) 19.94 years B) 21.94 years C) 20.94 years D) 23.94 years

44) You just put \$3264 in a CD that is expected to earn 15% compounded monthly, and \$9018 in a savings account that is expected to earn 4% compounded annually. Determine when, to the nearest year, the values of your two investments will be the same. 44) _____
A) 4 years B) 12 years C) 9 years D) 6 years

45) You have money in an account at 7% interest, compounded monthly. To the nearest year, how long will it take for your money to double? 45) _____
A) 6 years B) 14 years C) 8 years D) 10 years

46) You have money in an account at 10% interest, compounded monthly. To the nearest year, how long will it take for your money to triple? 46) _____
A) 15 years B) 11 years C) 7 years D) 9 years

47) \$6149 is deposited into a savings account at 10% interest, compounded weekly. To the nearest year, how long will it take for the account balance to reach \$1,000,000? 47) _____
A) 46 years B) 51 years C) 71 years D) 36 years

48) You just put \$4190 in a CD that is expected to earn 17% compounded monthly, and \$8773 in a savings account that is expected to earn 3% compounded monthly. Determine when, to the nearest year, the values of your two investments will be the same. 48) _____
A) 4 years B) 5 years C) 7 years D) 2 years

Find the value.

49) $s_{\overline{19}|0.02}$ 49) _____
A) 24.297 B) 72.841 C) 22.841 D) 21.412

50) $s_{\overline{14}|0.08}$ 50) _____
A) 36.715 B) 27.152 C) 21.495 D) 24.215

Find the future value of the ordinary annuity. Interest is compounded annually, unless otherwise indicated.

51) $R = \$100, i = 0.06, n = 6$ 51) _____
A) \$2364.20 B) \$563.71 C) \$223.04 D) \$697.53

52) $R = \$1000, i = 0.06, n = 13$ 52) _____
A) \$35,548.80 B) \$16,869.94 C) \$3353.66 D) \$18,882.14

53) $R = \$7500, i = 12\%$ interest compounded semiannually for 9 years 53) _____
A) \$356,792.39 B) \$231,792.39 C) \$154,747.70 D) \$211,596.60

54) $R = \$900, i = 8\%$ interest compounded semiannually for 8 years 54) _____
A) \$19,280.52 B) \$18,021.23 C) \$42,142.08 D) \$19,642.08

Find the periodic payment that will render the sum.

55) $S = \$39,000$, interest is 8% compounded annually, payments made at the end of each year for 12 years 55) _____
A) \$3666.58 B) \$2055.11 C) \$3170.81 D) \$2342.98

56) $S = \$270,000$, interest is 10% compounded semiannually, payments made at the end of each semiannual period for 8 years 56) _____
A) \$5607.44 B) \$28,274.89 C) \$23,609.88 D) \$11,412.88

57) $S = \$23,000$, interest is 18% compounded monthly, payments made at the end of each month for 3 years 57) _____
A) \$509.80 B) \$6438.25 C) \$486.51 D) \$612.70

58) $S = \$36,000$, interest is 12% compounded quarterly, payments are made at the end of each quarter for 5 years 58) _____
A) \$1339.77 B) \$1797.88 C) \$1208.95 D) \$1935.60

Find the amount of each payment to be made into a sinking fund so that enough will be present to accumulate the following amount. Payments are made at the end of each period. The interest rate given is per period.

59) \$5500; money earns 11% compounded annually; 6 annual payments 59) _____
A) \$562.18 B) \$695.07 C) \$883.14 D) \$323.46

60) \$83,000; money earns 8% compounded semiannually for 10 years 60) _____
A) \$2999.51 B) \$1515.20 C) \$2787.29 D) \$2596.25

61) \$83,000; money earns 3% compounded quarterly for $4\frac{1}{2}$ years 61) _____
A) \$2082.61 B) \$2016.88 C) \$4324.11 D) \$540.11

- 62) \$75,000; money earns 4.0% compounded monthly for $1\frac{1}{2}$ years 62) _____
A) \$1964.30 B) \$2023.85 C) \$234.68 D) \$4049.86

Find the future value of the annuity due.

- 63) Payments of \$500 made at the beginning of each year for 14 years at 5% compounded annually 63) _____
A) \$8356.49 B) \$19,299.32 C) \$9299.32 D) \$10,289.28
- 64) \$800 deposited at the beginning of each year for 15 years at 8% compounded annually 64) _____
A) \$18,571.94 B) \$23,459.43 C) \$30,921.69 D) \$20,921.69
- 65) \$1500 deposited at the beginning of each year for 13 years at 10% compounded annually 65) _____
A) \$30,576.43 B) \$40,462.48 C) \$35,284.07 D) \$50,284.07
- 66) \$200 deposited at the beginning of each quarter for 7 years at 9% compounded quarterly 66) _____
A) \$2005.69 B) \$7857.75 C) \$7120.14 D) \$7484.84

Solve the problem.

- 67) If Bob deposits \$5000 at the end of each year for 4 years in an account paying 10% interest compounded annually, find the amount he will have on deposit. 67) _____
A) \$16,550.00 B) \$18,205.00 C) \$30,525.50 D) \$23,205.00
- 68) Lou has an account with \$10,000 which pays 8% interest compounded annually. If to that account, Lou deposits \$5000 at the end of each year for 4 years, find out the amount in the account after the last deposit. 68) _____
A) \$35,730.56 B) \$36,135.45 C) \$32,530.56 D) \$22,530.56
- 69) At the end of every 3 months, Teresa deposits \$100 into an account that pays 6% compounded quarterly. After 3 years, she puts the accumulated amount into a certificate of deposit paying 8.5% compounded semiannually for 1 year. When this certificate matures, how much will Teresa have accumulated? 69) _____
A) \$1535.24 B) \$1410.54 C) \$1417.33 D) \$1380.12
- 70) Which of the following investments is larger after 11 years? 70) _____
A) \$8750 is deposited annually and earns 5% interest compounded annually.
B) \$700 is deposited monthly and earns 5% interest compounded monthly.
- 71) Which of the following investments is larger after 10 years? 71) _____
A) An initial amount of \$16,000 is deposited with \$800 deposited monthly, with interest earned at 6.75% compounded monthly.
B) An initial amount of \$19,200 is deposited with \$9600 deposited annually, with interest earned at 6.75% compounded annually.
- 72) Joan wants to start an IRA that will have \$580,000 in it when she retires in 29 years. How much should she invest annually in her IRA to do this if the interest is 16% compounded annually? 72) _____
A) \$84.73 B) \$1220.60 C) \$1271.08 D) \$1258.08
- 73) Mark wants to start an IRA that will have \$450,000 in it when he retires in 27 years. How much should he invest quarterly in his IRA to do this if the interest is 12% compounded quarterly? 73) _____
A) \$565.27 B) \$578.27 C) \$6113.61 D) \$1105.39

74) Laura wants to start an IRA that will have \$870,000 in it when she retires in 29 years. How much should she invest monthly in her IRA to do this if the interest is 15% compounded monthly? 74) _____
 A) \$146.14 B) \$133.14 C) \$35,683.50 D) \$2507.54

75) Green Thumb Landscaping wants to build a \$133,000 greenhouse in 2 years. The company sets up a sinking fund with payments made quarterly. Find the payment into this fund if the money earns 12% compounded quarterly. 75) _____
 A) \$9371.18 B) \$7009.10 C) \$13,091.19 D) \$14,956.70

Find the value.

76) $\overset{a}{\overline{30}}|0.03$ 76) _____
 A) 19.6004 B) 47.0662 C) 19.1885 D) 20.0004

77) $\overset{a}{\overline{28}}|0.065$ 77) _____
 A) 18.0228 B) 12.7465 C) 12.9075 D) 12.575

Find the present value of the ordinary annuity.

78) Payments of \$490 made annually for 13 years at 6% compounded annually 78) _____
 A) \$4337.82 B) \$4554.55 C) \$4108.06 D) \$4336.26

79) Payments of \$3900 made annually for 25 years at 9% compounded annually 79) _____
 A) \$38,308.05 B) \$37,853.40 C) \$38,269.14 D) \$38,723.10

80) Payments of \$16,000 made annually for 10 years at 12% compounded annually 80) _____
 A) \$90,403.57 B) \$90,435.20 C) \$103,640.00 D) \$95,003.20

81) Payments of \$95,000 made semiannually for 12 years at 12% compounded semiannually 81) _____
 A) \$842,013.50 B) \$1,191,338.00 C) \$1,192,283.92 D) \$1,214,423.00

Find the lump sum deposited today that will yield the same total amount as this yearly payment (made at the end of each year for 20 years at the given interest rate, compounded annually).

82) \$750 at 3% 82) _____
 A) \$11,150.62 B) \$10,742.40 C) \$11,561.25 D) \$11,158.12

83) \$30,000 at 5% 83) _____
 A) \$373,866.30 B) \$362,559.00 C) \$373,746.00 D) \$384,636.00

Find the payment necessary to amortize the loan.

84) \$90,000; 8% compounded annually; 10 annual payments 84) _____
 A) \$13,412.62 B) \$12,606.81 C) \$14,407.15 D) \$13,410.62

85) \$10,000; 9% compounded semiannually; 10 semiannual payments 85) _____
 A) \$1262.36 B) \$1558.19 C) \$1375.74 D) \$1263.79

86) \$1300; 12% compounded quarterly; 8 quarterly payments 86) _____
 A) \$261.70 B) \$185.19 C) \$185.24 D) \$166.96

Find the monthly house payment necessary to amortize the following loan.

- 87) In order to purchase a home, a family borrows \$80,000 at 11% for 30 yr. What is their monthly payment? 87) _____
A) \$761.86 B) \$24.44 C) \$784.09 D) \$733.33
- 88) In order to purchase a home, a family borrows \$108,000 at 8.8% for 30 yr. What is their monthly payment? Round the answer to the nearest cent. 88) _____
A) \$1244.22 B) \$4023.64 C) \$853.50 D) \$792.00
- 89) In order to purchase a home, a family borrows \$318,000 at 11.3% for 15 yr. What is their monthly payment? Round the answer to the nearest cent. 89) _____
A) \$2994.50 B) \$4140.23 C) \$22,831.98 D) \$3674.51
- 90) In order to purchase a home, a family borrows \$45,000 at 11% for 30 yr. What is their monthly payment? 90) _____
A) \$441.05 B) \$412.50 C) \$13.75 D) \$428.55
- 91) In order to purchase a home, a family borrows \$157,000 at 7.1% for 15 yr. What is their monthly payment? Round the answer to the nearest cent. 91) _____
A) \$1419.95 B) \$10,968.91 C) \$1656.01 D) \$928.92

Use an amortization table to solve the problem. Round to the nearest cent.

- 92) The monthly payments on a \$58,000 loan at 13% annual interest are \$641.48. How much of the first monthly payment will go toward the principal? 92) _____
A) \$13.15 B) \$628.33 C) \$558.09 D) \$83.39
- 93) The monthly payments on a \$54,000 loan at 12% annual interest are \$568.62. How much of the first monthly payment will go toward the principal? 93) _____
A) \$540.00 B) \$28.62 C) \$68.23 D) \$500.39
- 94) The monthly payments on a \$58,000 loan at 11% annual interest are \$659.46. How much of the first monthly payment will go toward the principal? 94) _____
A) \$586.92 B) \$127.79 C) \$531.67 D) \$72.54

Solve the problem.

- 95) In order to purchase a home, a family borrows \$45,000 at an annual interest rate of 10%, to be paid back over a 30 year period in equal monthly payments. What is their monthly payment? 95) _____
A) \$408.92 B) \$375.00 C) \$394.91 D) \$12.50
- 96) Tasha borrowed \$15,000 to purchase a new car at an annual interest rate of 10%. She is to pay it back in equal monthly payments over a 3 year period. What is her monthly payment? 96) _____
A) \$41.67 B) \$567.17 C) \$125.00 D) \$484.01
- 97) Julio buys a bike which has a cash price of \$250. He agrees to take a one-year loan for the entire amount at 27%, payable in 12 installments. After 8 of the 12 payments, he gets some birthday money and decides to pay off his loan. Find the unpaid balance. 97) _____
A) \$88.72 B) \$90.83 C) \$288.00 D) \$159.17

- 98) The Habers purchase a \$6500 living room set and take out a two-year loan for the entire amount at 26% with monthly payments. After 14 of 24 installments, they decide to pay it off. How much do they save in interest? How much is needed to pay the balance of the loan? 98) _____
- A) \$1904.32, \$4902.52 B) \$383.53, \$3118.27
C) \$1520.79, \$3381.73 D) \$350.18, \$8404.32
- 99) You want to take out a loan to buy a new car for which you need to finance \$11,158. Your bank will give you a loan at 7% compounded monthly. You look at your budget and decide that you can afford a payment of \$295 a month. How many years, to the nearest tenth of a year, must the loan be taken out to meet these conditions? 99) _____
- A) 2.1 years B) 3.6 years C) 5.0 years D) 7.5 years
- 100) You have a \$4028 credit card debt, and you plan to pay it off through monthly payments of \$78. If you are being charged 12% interest per year, how long (to the nearest tenth of a year) will it take you to repay your debt? 100) _____
- A) 4.9 years B) 3.7 years C) 7.3 years D) 6.1 years