Math 100

Practice Test #2

Spring 2024

Name_____

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

1) George invested $7500 for 3 years at a simple interest rate of 8%. How much interest did he earn?

    A) $2000   B) $3500   C) $1800   D) $4500

2) Jane borrows $2500 for 2 years at a simple interest rate of 12%. What is the total amount that must be repaid?

    A) $5600   B) $6000   C) $3100   D) $4500

3) What is the amount that must be repaid on a $7200 loan for 5 years at 12% simple interest? How much interest will be paid for the loan?

    A) $9865 must be repaid, $3250 of it is interest.   B) $11,520 must be repaid, $4320 of it is interest.
    C) $19,865 must be repaid, $4265 of it is interest.   D) $12,560 must be repaid, $4539 of it is interest.

4) How many years will it take for $5000 to grow to $6500 if the simple interest rate is given a 3.2%?

A) About 9 years   B) About 12 years   C) About 8 years   D) About 15 years

5) Find the future amount on deposit when $4400 is deposited for 10 years at 6% compounded semiannually.

A) $5889.10   B) $6100.47   C) $8810.45   D) $7946.89   E) $6574.50

6) Find the total amount on deposit when $9000 is deposited for 16 years at 10% compounded annually.

A) $52,695   B) $45, 872   C) $23,560   D) $41,355

7) Find the total amount on deposit when $2500 is deposited for 6 years at 16% compounded quarterly.

A) $4900   B) $6408.26   C) $6090   D) $3590   E) $3907.50

8) A rich uncle wants to give his oldest niece $9000 on her eighteenth birthday. How much will the uncle have to invest at 10% compounded semiannually to reach at least $9000 if his oldest niece is having her tenth birthday?

A) $6432.15   B) $4122.77   C) $3567.12   D) $5256.46

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9) What is the effective rate given a nominal interest rate of 12% compounded monthly?

A) 12.7%   B) $60   C) 12.5%   D) 12.2%   E) 12%

10) With all things being equal, what is the most important variable in determining a decision on an interest bearing account?

   A) The number of years money is in an account

   B) The interest rate

   C) The number of compounds per year

11) Which loan for a given amount produces a lower monthly payment, a 20-year loan at 10% or a 30-year loan at 10 %?

   A) Not enough information given

   B) The 20-year loan

   C) The 30-year loan

12) Which loan for a given amount of money produces the higher amount of interest and total amount paid on a loan?

   10-year loan at 9%
   or
   20-year loan at 8%?

   A) The 10- year loan

   B) Not enough information given.

   C) The 20-year loan

13) The Smith family assumed a $120,000 mortgage for 30 years at 8%. What is their monthly payment?

A) $932.56   B) $880.80   C) $569.24   D) $523.32

14) In the problem 13, how much interest is paid on the 30 year loan?

   A) $317,088   B) $197,088   C) $38,544   D) $158,544

15) Which of the following loan's monthly payment would pay more off (initially) from the principal versus the interest.

   A) A 7 year loan   B) A 20 year loan   C) A 15 year loan   D) A 30 year loan

16) A monthy payment on a 15 year, $250,000 loan, at 5% annual interest is $1342.05. How much money of the first month's payment goes towards the principal?

A) $672.54   B) $300.38   C) $1041.67   D) $1342.05

Answer questions 17-22 from the given credit history for the month of July.

Bob has made the following table to compute the finance charge for his March credit card bill. Bob paid off all outstanding debts from his February purchases.

Date	Purchase	Balance	Number of Days	Total
March 15-19	$201	$201	5	'X'
March 20-26	$17.44	$217.44	"Y"	$1522.08
March 27-April 5	$17.33	'Z'	10	$2347.70
April 6-April 14	$19.99	$254.76	9	$2292.84

17. What is the 'X' value in the above table?

        a. $201.00
        b. $150.00
        c. $1005.00
        d. $1067.00

18. What is the 'Y' value in the above table?

        a. 6
        b. 7
        c. 5
        d. 8

19. What is the value of 'Z' in the above table?

        a. $214.77
        b. $17.44
        c. $217.44
        d. $234.77

20. What is the average daily balance for the account for the billing period?

        a. $231.21
        b. $7167.62
        c. $31
        d. $414.87

21. If the APR is 24%, what would the finance charges be on the account if not paid in full for the month of March purchases?

a. $8.30
b. $18.30
c. $254.76
d. $4.62

22. To avoid finance charges for the month of March, how much should Bob pay at the end of the billing period to his credit card company?

a. $18.30
b. $8.30
c. $4.62
d. $254.76

23. If a couple has a monthly payment of $874.66 on a $110,000, 15 year loan, how much interest do they owe on the loan at the end of the 15 years?

a. $157,438.80

b. $110,000.00

c. $47,438.80

d. $874.66

24. Which of the following home mortgage loans would you choose if you wanted a higher monthly payment so you would not pay as much in interest over the life of the loan to a bank?

a. a 25 year mortgage

b. a 30 year mortgage

c. a 20 year mortgage

d. a 15 year mortgage

25. What is the simple interest rate be for an account to grow from $3500 to $4300 if the interest rate in 4 years?

a. 1.4%
b. 5.7%
c. 6.4%
d. 3.9%