Math 1324 – Finite
Professor: Fred Khoury

Exam **2** *Practice*

1) Find the simple interest to $5130 at 4% for 10 months 1) _____

A) $188.10 B) $153.90 C) $171.00 D) $172.44

2) Find the simple interest to $22,000 at 4% for 111 days 2) _____

A) $880.00 B) $268.89 C) $22,271.33 D) $271.33

3) What is the purchase price of a 26–week T–bill with a maturity value of $1000 that earns an annual interest rate of 5.25%. Use 360 days. 3) _____

A) $1000 B) $25.58 C) $974.42 D) $1025.58

4) The principal $15,400 is accumulated with simple interest of 16% for 5 years. Find the amount that will be accumulated in the account under the given conditions. 4) _____

A) $27,720 B) $20,212.50 C) $12,320 D) $15,892.80

5) Samantha's savings account has a balance of $4643. After 25 years, what will the amount of interest be at 6% compounded annually? 5) _____

A) $15,284.16 B) $15,275.16 C) $15,289.16 D) $2785.80

6) Find the compound interest earned $700 at 8% compounded semiannually for 4 years 6) _____

A) $118.90 B) $595.65 C) $258.00 D) $252.34

7) Brandon's savings account has a balance of $4069. After 4 years what will the amount of interest be at 5% compounded quarterly? 7) _____

A) $894.73 B) $885.73 C) $899.73 D) $101.73

8) How long will it take for $4900 to grow to $8000 at an interest rate of 1.9% if the interest is compounded continuously? Round the number of years to the nearest hundredth. 8) _____

A) 0.26 yr B) 25.8 yr C) 2.58 yr D) 2580.03 yr

9) Jennifer invested $4000 in her savings account for 4 years. When she withdrew it, she had $4350.52. Interest was compounded continuously. What was the interest rate on the account? Round to the nearest tenth of a percent. 9) _____

A) 2.2% B) 2.1% C) 2% D) 2.25%

10) Larry wants to start an IRA that will have $420,000 in it when he retires in 29 years. How much should he invest semiannually in his IRA to do this if the interest is 6% compounded semiannually? 10) _____

A) $2354.65 B) $9288.16 C) $2754.16 D) $2767.16

11) Cara needs $9,000 in 10 years. What amount can she deposit at the end of each quarter at 10% interest compounded quarterly so she will have her $9,000? 11) _____

A) $138.93 B) $133.53 C) $128.41 D) $564.71

12) If Jay bought a lot for $8,000 and sold it 10 years later for $24,000, what was her percentage rate of return on this investment if it was compounded annually? 12) _____

A) 11.2934% B) 200% C) 300% D) 11.6123%

13) Find the rate of interest required to achieve the condition 13) _____

A = $32,000
P = $8,000
t = 10 years
compounded quarterly

A) 14.1060% B) 14.8698% C) 14.3547% D) 30%

14) Sammy borrowed $10,000 to purchase a new car at an annual interest rate of 11%. She is to pay it back in equal monthly payments over a 5−year period. How much total interest will be paid over the period of the loan? Round to the nearest dollar. 14) _____

A) $1435 B) $3630 C) $92 D) $3045

15) Find the amount that should be invested now to accumulate the following amount $15,500 at 4% compounded annually for 4 years 15) _____

A) $13,249.46 B) $18,132.81 C) $13,779.44 D) $2250.54

16) The monthly payments on a $79,000 loan at 14% annual interest are $982.76. How much of the first monthly payment will go toward interest? 16) _____

A) $845.17 B) $1106.00 C) $921.67 D) $137.59

17) Find the effective rate corresponding to the given nominal rate. 15% compounded semiannually Round results to the nearest 0.01 percentage points. 17) _____

A) 15.87% B) 15.00% C) 16.08% D) 15.56%

18) If inflation is 8% a year compounded annually, what will it cost in 9 years to buy a house currently valued at $74,000? 18) _____

A) $105,325.07 B) $136,968.84 C) $147,926.34 D) $159,760.45

19) A small company borrows $37,000 at 6% compounded monthly. The loan is due in 9 years. How much interest will the company pay? 19) _____

A) $26,091.42 B) $26,238.16 C) $26,406.88 D) $63,406.88

20) Andrea Gilford's savings account has a balance of $2114. After 2 years, what will the amount of interest be at 5% compounded quarterly? 20) _____

A) $220.88 B) $52.85 C) $211.88 D) $225.88

21) A municipal bond with a face value of $5000 in ten years can be purchased now for $2875. Find the simple interest rate. Round to the nearest tenth of a percent. 21) _____

A) 5.9% B) 5.4% C) 5.7% D) 5.5%

22) You have money in an account at 4% interest, compounded monthly. To the nearest year, how long will it take for your money to triple? 22) _____

A) 22 years B) 17 years C) 28 years D) 39 years

23) Barbara knows that she will need to buy a new car in 3 years. The car will cost $15,000 by then. How much should she invest now at 6%, compounded quarterly, so that she will have enough to buy a new car? 23) _____

A) $11,881.40 B) $13,727.12 C) $13,349.95 D) $12,545.81

24) Find the periodic payment that will render the sum S = $18,000, interest is 8% compounded annually, payments made at the end of each year for 12 years 24) _____

A) $1081.37 B) $1463.45 C) $948.51 D) $1692.27

25) If Bob deposits $5000 at the end of each year for 5 years in an account paying 10% interest compounded annually, find the amount he will have on deposit. 25) _____

A) $38,578.05 B) $23,205.00 C) $25,525.50 D) $30,525.50

26) Which of the following investments is larger after 27 years? 26) _____

A) $600 is deposited monthly and earns 9% interest compounded monthly.
B) $7500 is deposited annually and earns 9% interest compounded annually.

27) Larry wants to start an IRA that will have $850,000 in it when he retires in 25 years. How much should he invest semiannually in his IRA to do this if the interest is 8% compounded semiannually? 27) _____

A) $20,410.17 B) $5554.67 C) $5373.46 D) $5567.67

28) Mark wants to start an IRA that will have $250,000 in it when he retires in 19 years. How much should he invest quarterly in his IRA to do this if the interest is 6% compounded quarterly? 28) _____

A) $5936.00 B) $2058.02 C) $1785.37 D) $1330.48

29) Find the present value of the ordinary annuity. 29) _____
Payments of $54 made quarterly for 10 years at 8% compounded quarterly

A) $1452.74 B) $1477.20 C) $530.18 D) $1486.92

30) Tasha borrowed $15,000 to purchase a new car at an annual interest rate of 9.5%. She is to pay it back in equal monthly payments over a 3 year period. How much total interest will be paid over the period of the loan? Round to the nearest dollar. 30) _____

A) $1643 B) $3760 C) $2298 D) $119

31) You want to take out a loan to buy a new car for which you need to finance $27,504. Your bank will give you a loan at 8% compounded monthly. You look at your budget and decide that you can afford a payment of $282 a month. How many years, to the nearest tenth of a year, must the loan be taken out to meet these conditions? 31) _____

A) 7.9 years B) 27.7 years C) 18.4 years D) 13.2 years

32) Mary finances $150,000 towards the purchase of a new home through a 20−year mortgage. The interest rate applied to the monthly unpaid balance is 5.2% 32) _____

Prepare an amortization schedule showing the first four payments for the loan.

Payment Number	Amount of Payment	Interest for Period	Portion to Principal	Principal at End of Period
1				
2				
3				
4				

33) Mary finances $150,000 towards the purchase of a new home through a 20−year mortgage. The interest rate applied to the monthly unpaid balance is 7% 33) _____

Prepare an amortization schedule showing the first four payments for the loan.

Payment Number	Amount of Payment	Interest for Period	Portion to Principal	Principal at End of Period
1				
2				
3				
4				

Answer Key
Testname: FINITE_PRACTICE-2

1) C
2) D
3) C
4) A
5) A
6) C
7) A
8) B
9) B
10) D
11) B
12) D
13) A
14) D
15) A
16) C
17) D
18) C
19) C
20) A
21) C
22) C
23) D
24) C
25) D
26) A
27) D
28) C
29) B
30) C
31) D

32)

Payment Number	Amount of Payment	Interest for Period	Portion to Principal	Principal at End of Period
1	1006.58	650.00	356.58	149,643.42
2	1006.58	648.45	358.13	149,285.29
3	1006.58	646.90	359.68	148,925.61
4	1006.58	645.34	361.24	148,564.37

33)

Payment Number	Amount of Payment	Interest for Period	Portion to Principal	Principal at End of Period
1	1162.95	875.00	287.95	149,712.05
2	1162.95	873.32	289.63	149,422.42
3	1162.95	871.63	291.32	149,131.10
4	1162.95	869.93	293.02	148,838.08