10-1A RETIREMENT INCOME FROM SAVINGS

To do now:

1. **Write down the objective**
2. **Take out earbuds**

You will need:

- **Student Notes**
- **Textbook**
- **Calculator**
- **Notebook Paper**
- **Pen or Pencil**

Items in red are needed for the lecture.

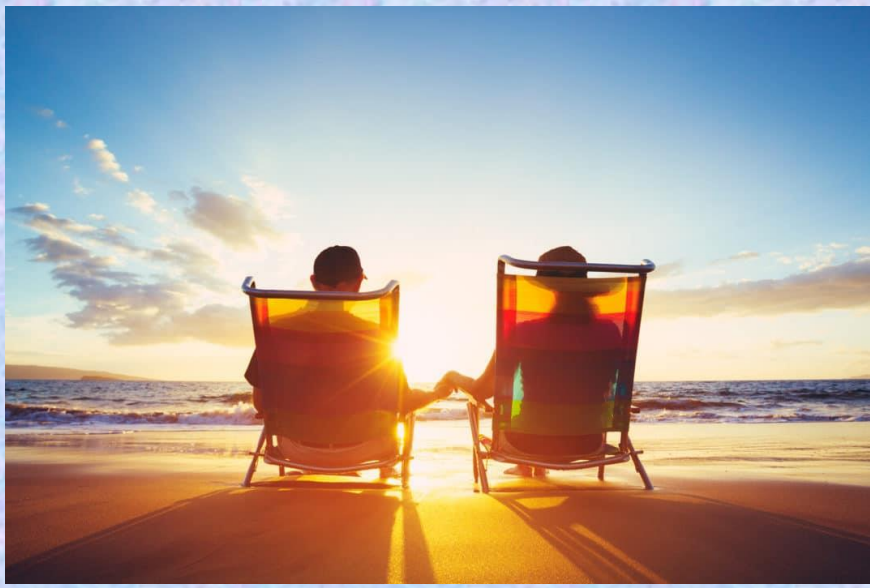
OBJECTIVES

Calculate future values of retirement investments.

Compare the tax savings by making contributions to pre-tax retirement savings accounts.

What do you want to do once you have retired?

-
-
-
-



What can you do now to make sure that happens?

SAVE WISELY!!!!!!

But how do you do that?

This unit helps to answer that question.

How do you save wisely?

There are different types of retirement accounts

- IRA – It is tax-deferred and opened by an individual
- Roth IRA – Not tax deferred. Withdrawals from the account are tax free
- 401K – It is tax-deferred and sponsored by an employer for an employee
- 403b - a tax-sheltered annuity

Should you save for retirement now or wait until later?

How should you invest it?

- Investment IRA (Stock Market)

OR

- A Bank IRA

In Chapter 2-7 we learned:
Future value of a periodic deposit investment

periodic means regularly scheduled

$$B = \frac{P\left(\left(1+\frac{r}{n}\right)^{nt}-1\right)}{\frac{r}{n}}$$

B = future value

P = periodic deposit amount

r = annual interest rate (converted)

n = number of times interest is compounded annually

t = length of investment in years

Example 1A

- Blythe is 40 years old.
- She is planning on retiring in 25 years.
- She has opened an IRA with an APR of 1.25% compounded monthly.
- If she makes monthly deposits of $500 to the account, how much will she have in the account when she is ready to retire?

B = future value B

P = periodic amount $500

r = rate (converted) .0125

n = number of compounds 12

t = years 25

$$B = \frac{P\left(\left(1+\frac{r}{n}\right)^{nt}-1\right)}{\frac{r}{n}}$$

Example 1A

- Blythe is 40 years old.
- She is planning on retiring in 25 years.
- She has opened an IRA with an APR of 1.25% compounded monthly.
- If she makes monthly deposits of $500 to the account, how much will she have in the account when she is ready to retire?

B = future value B

P = periodic amount $500

r = rate (converted) .0125

n = number of compounds 12

t = years 25

$$B = \frac{500\left(\left(1+\frac{.0125}{12}\right)^{12\cdot 25}-1\right)}{\frac{.0125}{12}}$$

$175,975.51

Example 1B

- Blythe's son Dan is 20 years old.
- He is planning on retiring in 45 years.
- He has opened an **Investment** IRA with an APR of 10.25% compounded monthly.
- If he wants to have saved $175,000 by the time he retires, how much will he have to save monthly?

Example 1B

- Blythe's son Dan is 20 years old.
- He is planning on retiring in 45 years.
- He has opened an **Investment** IRA with an APR of 10.25% compounded monthly.
- If he wants to have saved $175,000 by the time he retires, how much will he have to save monthly?

$$175000 = \frac{P\left(\left(1+\frac{.1025}{12}\right)^{12\cdot 45}-1\right)}{\frac{.1025}{12}}$$

***B* = future value** **$175,000**

***P* = periodic amount** **P**

***r* = rate (converted)** **.1025**

***n* = number of compounds** **12**

***t* = years** **45**

$15.29

Should you invest in a
Regular IRA
(using pre-tax $)
or a
Roth IRA
(using post-tax $)?

Example 2

Suppose that Blythe's annual contribution of $6,000 was in a Roth IRA. How much could she save in one year if she used a Regular IRA instead? Her income for that year was $78,500.

Step 1: Determine how much her taxes with the Roth IRA were. (Use a table or worksheet)

According to the table on page 728 of the textbook she paid $15,425

	Roth IRA	Regular IRA
Taxable Income	78,500	
Taxes	15,425	
Investment	6,000	6,000
Income after IRA & Taxes		

If line 27 (taxable income) is—		
At least	But less than	Single
78,000		
78,000	78,050	15,300
78,050	78,100	15,313
78,100	78,150	15,325
78,150	78,200	15,338
78,200	78,250	15,350
78,250	78,300	15,363
78,300	78,350	15,375
78,350	78,400	15,388
78,400	78,450	15,400
78,450	78,500	15,413
78,500	78,550	15,425

Example 2

Suppose that Blythe's annual contribution of $6,000 was in a Roth IRA. How much could she save in one year if she used a Regular IRA instead? Her income for that year was $78,500.

Step 2: Determine how much income she has after taxes and the Roth IRA.

Income after taxes and Investment = Income – Taxes – IRA

= 78,500 – 15,425 – 6,000

= 57,075

	Roth IRA	Regular IRA
Taxable Income	78,500	
Taxes	15,425	
IRA	6,000	6,000
Income after IRA & Taxes	57,075	

Example 2

Suppose that Blythe's annual contribution of $6,000 was in a Roth IRA. How much could she save in one year if she used a Regular IRA instead? Her income for that year was $78,500.

Step 3: Determine how much her new taxable income with the Regular IRA would be.

Taxable Income = Income – Tax deferred IRA

= 78,500 – 6,000

= 72,500

	Roth IRA	Regular IRA
Taxable Income	78,500	72,500
Taxes	15,425	
IRA	6,000	6,000
Income after IRA & Taxes	57,075	

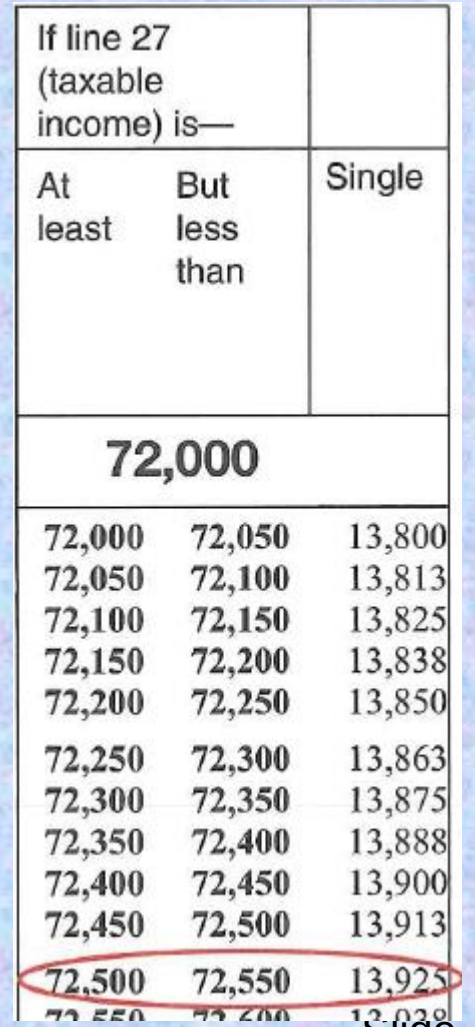
Example 2

Suppose that Blythe's annual contribution of $6,000 was in a Roth IRA. How much could she save in one year if she used a Regular IRA instead? Her income for that year was $78,500.

Step 4: Determine how much her taxes with the Regular IRA would be. (Use a table or worksheet)

According to the table on page 728 of the textbook she paid $13,925

	Roth IRA	Regular IRA
Taxable Income	78,500	72,500
Taxes	15,425	13,925
IRA	6,000	6,000
Income after IRA & Taxes	57,075	



If line 27 (taxable income) is—		
At least	But less than	Single
72,000		
72,000	72,050	13,800
72,050	72,100	13,813
72,100	72,150	13,825
72,150	72,200	13,838
72,200	72,250	13,850
72,250	72,300	13,863
72,300	72,350	13,875
72,350	72,400	13,888
72,400	72,450	13,900
72,450	72,500	13,913
72,500	72,550	13,925

Example 2

Suppose that Blythe's annual contribution of $6,000 was in a Roth IRA. How much could she save in one year if she used a Regular IRA instead? Her income for that year was $78,500.

Step 5: Determine how much income she has after taxes and the Regular IRA.

Income after taxes and Investment = Income – Taxes – IRA

= 78,500 – 13,925 – 6,000

= 58,575

	Roth IRA	Regular IRA
Taxable Income	78,500	72,500
Taxes	15,425	13,925
IRA	6,000	6,000
Income after IRA & Taxes	57,075	58,575

Example 2

Suppose that Blythe's annual contribution of $6,000 was in a Roth IRA. How much could she save in one year if she used a Regular IRA instead? Her income for that year was $78,500.

Difference between Investments = 58,575 – 57,075

= **$1,500.00**

	Roth IRA	Regular IRA
Taxable Income	78,500	72,500
Taxes	15,425	13,925
IRA	6,000	6,000
Income after IRA & Taxes	57,075	58,575

You have **$1,500.00** extra money to invest!!!

Life Lesson from Ms. Brown

- Save for retirement now using an investment IRA.
- Choose a regular IRA instead of a Roth IRA.
  - You get a tax break now.
  - The taxes you would have paid can be invested and you will get earnings from it (instead of the gov't.)

What do I do now?

The 10-1A Assignment

Note for Q#11:
x = $3,000, t=28%

When is it due?

Next Class