EXERCISES: MUTUAL FUNDS

The following are suggestions for self-assessment exercises on mutual funds. All are taken from your book, but may change depending on the edition that you have (Mishkin/Eakins – Financial markets and institutions, Pearson). Try to answer as soon as you reviewed the chapter on mutual funds. Solutions will be provided in a following video.

1. A mutual fund reported year-end total assets of $2,347,000,000. Determine the expense ratio if total fees amounted to $18,580,000.
2. A mutual fund offers "A" shares which have a 5% upfront load and an expense ratio of 0.76%. The fund also offers "B" shares which have a 3% backend load and an expense ratio of 0.87%. Which shares make more sense for an investor looking over an 18 year horizon?
3. Calculate the NAV of the following fund assuming 3,500 shares are outstanding. Calculate the percentage change in the NAV of the fund if stock C climbs to $33.41.

Stock	*Number owned*	*Market value*
A	500	$5.74
B	6,000	$65.10
C	3,000	$12.04
Cash	n/a	$4,368.40

4. Calculate the NAV of the following fund if 5,000,000 shares are outstanding. Assuming you bought shares in this fund a year ago at $5.06, determine the yield on your investment.

Stock (current market value)	$15,000,000
Bonds (current market value)	$12,000,000
Cash	$800,000
Liabilities	-$200,000

5. Follow step-by-step this set of exercises on the same mutual fund.

   A. On January 1st, a mutual fund has the following assets and prices at 4:00 p.m.; Calculate the net asset value (NAV) for the fund. Assume that 8,000 shares are outstanding for the fund.

Stock	**Shares owned**	**Market price**
1	1,000	$1.97
2	5,000	$48.26
3	1,000	$26.44
4	10,000	$67.49
5	3,000	$2.59

   B. An investor sends the fund a check for $50,000. If there is no front-end load, calculate the new number of shares and price/share. Assume the manager purchases 1,800 shares of stock 3, and the rest is held as cash.

   C. On January 2nd, the prices at 4:00 PM are as follows; calculate the NAV for the fund.

Stock	**Shares owned**	**Market price**
1	1,000	$2.03
2	5,000	$51.37
3	2,800	$29.08
4	10,000	$67.19
5	3,000	$4.42
cash	n.a.	$2.408

D. Assume the new investor then sells the 420 shares. What is his profit? What is the annualized return? The fund sells 800 shares of stock 4 to raise the needed funds.

E. To discourage short-term investing in its fund, the fund now charges a 5% upfront load and a 2% backend load. The same investor decides to put $50,000 back into the fund. Calculate the new number of shares outstanding. Assume the fund manager buys back as many round-lot shares of stock 4 with the cash.

F. On January 3rd, the prices at 4:00 PM are as follow. Calculate the new NAV.

Stock	Shares owned	Market price
1	1,000	$1.92
2	5,000	$51.18
3	2,800	$29.08
4	9,900	$67.19
5	3,000	$4.51
cash	n.a.	$5,353.40

G. Unhappy with the results, the new investor then sells the 389.09 shares. What is his profit? What is the new fund value?