**Quiz B for 4:00 Class: 8/29/12**          Name ___Key_____

Assume that you can buy or sell (or short-sell) any of the following securities:

Risk-free bonds: bonds that mature one year from today earn 2.5% per year and bonds that mature two years from today earn 3.5% per year.

Risky securities:

| Security | Price Today | Payoff one year from today if the economy is: | | Payoff two years from today if the economy is: | |
| --- | --- | --- | --- | --- | --- |
| | | Strong | Weak | Strong | Weak |
| Private Buy | $650 | $50 | $0 | $1200 | $200 |
| Market | $500 | $70 | $20 | $1000 | $0 |

What set of transactions today will generate an arbitrage profit for you today. In your answer list all transactions required today and all individual and total cash flows today, a year from today, and two years from today. Use a "+" for an inflow of cash and a "-"for an outflow of cash. Note: I recommend setting up a table like is in the notes, but this is not required.

**Wall Street Journal Questions are on the back of this page.**

Equivalent to Private: Buy market + short-sell a bond that matures for $20 in one year + buy a bond that matures for $200 in two years.

$$\text{No arbitrage price} = 500 - \underbrace{\frac{20}{1.025}}_{19.512} + \underbrace{\frac{200}{(1.035)^2}}_{186.702} = 667.19$$

| Trans(t=0) | $CF_0$ | $CF_1$ | | $CF_2$ | |
| --- | --- | --- | --- | --- | --- |
| | | S | W | S | W |
| Buy Private | -650 | +50 | ∅ | +1200 | +200 |
| Short Market | +500 | -70 | -20 | -1000 | ∅ |
| Buy bond that matures for $20 in one year. | -19.512 | +20 | +20 | ∅ | ∅ |
| Short-sell bond that matures for $200 in two years. | +186.702 | ∅ | ∅ | -200 | -200 |
| Total | +17.19 | ∅ | ∅ | ∅ | ∅ |