Chapter 3 - Example 2

Assume that securities A through D provide risk-free payoffs as follows:

		Cash Flow in:		
Security	Price today	One Year	Two Years	Three Years
A	95.552	100	0	0
B	91.754	0	100	0
C	87.959	0	0	100
D	525.000	200	200	200

a. What trades would allow you to take advantage of this arbitrage opportunity? Note: the trades should create an arbitrage profit for you.

b. What cash flows will your trades in part "a" generate today and at the end of each of the next 3 years?

a. Equivalent to D = 2A + 2B + 2C

cost of equivalent $= \underbrace{2 \times 95.552}_{191.104} + \underbrace{2 \times 91.754}_{183.508} + \underbrace{2 \times 87.959}_{175.918} = 550.53$

$\Rightarrow$ Arbitrage $\Rightarrow$ Buy D, short sell 2A, 2B + 2C

b.

$Trans_0$	CF_0	CF_1	CF_2	CF_3	$Trans_t$
Buy D	−525	+200	+200	+200	Payoffs (or sell t=3)
Short 2A	+191.104	−200	Ø	Ø	Buy to cover
Short 2B	+183.506	Ø	−200	Ø	"
Short 2C	+175.918	Ø	Ø	−200	"
Total	+25.53	Ø	Ø	Ø	