

Spring 2012 Final

2:30 B

~~11~~ a. $V_{port} = .8(100) - 61.5385 = 18.4615$

\Rightarrow sell call, buy .8 shares, short \$61.5385 bonds

	$\$0$	$\$80$	$\$130$
15 Sell call	20 +20	0	-40
15 Buy .8 shares	80 -80	+64	+104
15 Short bonds	61.5385 +61.5385	-64	-64
<u>Total</u>	<u>+1.5385</u>	<u>0</u>	<u>0</u>

$\bar{R}_A = \frac{1}{3}(-23 - 6 + 46); \bar{R}_C = \frac{1}{3}(-47 + 43 + 22)$

$Var_A = \frac{1}{3}((-23 - \bar{R}_A)^2 + (-6 - \bar{R}_A)^2 + (46 - \bar{R}_A)^2)$

$Var_C = \frac{1}{3}((-47 - \bar{R}_C)^2 + (43 - \bar{R}_C)^2 + (22 - \bar{R}_C)^2)$

$Cov_{A,C} = \frac{1}{3}((-23 - \bar{R}_A)(-47 - \bar{R}_C) + (-6 - \bar{R}_A)(43 - \bar{R}_C) + (46 - \bar{R}_A)(22 - \bar{R}_C))$

$SD_P = \sqrt{(0.75)^2 Var_A + (0.25)^2 Var_C + 2(0.75)(0.25) Cov_{A,C}}$