Quiz A for 2:30 Class: 9/24/12   Name Key

4:00

Use the following information to calculate the covariance and correlation between J.P. Morgan Chase (JPM) and AES Corporation (AES) over the past four years.

	Return on:	
Year	JPM	AES
2012	+ 39%	+ 7%
2011	– 24%	– 9%
2010	– 8%	– 22%
2009	+ 12%	+ 14%

Note: You don't have to solve anything, just set everything up.

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

$$+5\ \Big(\mathrm{COV} = \overset{+1}{\frac{1}{3}}\Big(\big(\overset{+7}{39} - \bar{R}_{JPM}\big)\big(\overset{+7}{7} - \bar{R}_{AES}\big) + \big(-24 - \bar{R}_{JPM}\big)\big(-9 - \bar{R}_{AES}\big) + \big(-8 - \bar{R}_{JPM}\big)\big(-22 - \bar{R}_{AES}\big) + \big(12 - \bar{R}_{JPM}\big)\big(14 - \bar{R}_{AES}\big)\Big) \quad 20$$

$$+4\ \Big(\bar{R}_{JPM} = \overset{+1}{\frac{1}{4}}\big(\overset{+7}{39} - 24 - 8 + 12\big) \quad 12$$

$$+4\ \Big(\bar{R}_{AES} = \overset{+1}{\frac{1}{4}}\big(\overset{+7}{7} - 9 - 22 + 14\big) \quad 12$$

$$+5\ \Big(\mathrm{Corr} = \frac{\mathrm{COV}}{SD_{JPM} \times SD_{AES}} \quad 5$$

$$+5\ \Big(SD_{JPM} = \sqrt{\overset{+1}{\frac{1}{3}}\Big(\big(\overset{+7}{39} - \bar{R}_{JPM}\big)^2 + \big(-24 - \bar{R}_{JPM}\big)^2 + \big(-8 - \bar{R}_{JPM}\big)^2 + \big(12 - \bar{R}_{JPM}\big)^2\Big)} \quad 13$$

$$+5\ \Big(SD_{AES} = \sqrt{\overset{+1}{\frac{1}{3}}\Big(\big(\overset{+7}{7} - \bar{R}_{AES}\big)^2 + \big(-9 - \bar{R}_{AES}\big)^2 + \big(-22 - \bar{R}_{AES}\big)^2 + \big(14 - \bar{R}_{AES}\big)^2\Big)} \quad 13$$