

# CFA® SAMPLE QUESTION - LEVEL I

## Portfolio Management

**Q:** A portfolio was created by investing 35% of the funds in asset A (standard deviation = 22%) and the balance has been invested in Asset B (standard deviation = 15%).

If the correlation coefficient is 0.85, what is the overall standard deviation of the portfolio?

### CORRECT ANSWER:

**(a) 16.79%**

Again, one of the formula you must remember in order to pass your CFA Level 1 examination.

$$\sigma_p = \sqrt{w_1^2\sigma_1^2 + w_2^2\sigma_2^2 + 2w_1w_2\rho_{1,2}\sigma_1\sigma_2}$$

$$\sigma_p = \sqrt{w_1^2\sigma_1^2 + w_2^2\sigma_2^2 + 2w_1w_2Cov_{1,2}}$$

So Overall standard deviation of the portfolio is:  
 $= [(0.35)^2 * (0.22)^2 + (0.65)^2 * (0.15)^2 + 2 * 0.35 * 0.65 * 0.85 * 0.22 * 0.15]^{0.5}$   
 $= 0.1679$  (i.e. 16.79%)



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