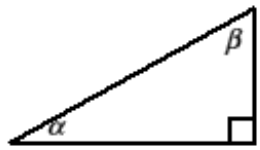
16. If $\alpha < \beta$, how many different values are there among the following expressions?

$\sin\alpha \sin\beta$ $\sin\alpha \cos\beta$ $\cos\alpha \sin\beta$ $\cos\alpha \cos\beta$



A 1 B 2 C 3 D 4 E It depends on the value of α

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16. **C** As $\alpha + \beta = 90°$, $\sin\alpha = \cos\beta$; $\cos\alpha = \sin\beta$. So $\sin\alpha \sin\beta = \sin\alpha \cos\alpha$; $\sin\alpha \cos\beta = \sin^2\alpha$; $\cos\alpha \sin\beta = \cos^2\alpha$; $\cos\alpha \cos\beta = \cos\alpha \sin\alpha$. As $\alpha < \beta$, $\alpha \neq 45°$. So $\sin\alpha \neq \cos\alpha$. Thus three of the four expressions have different values.