

Task. If $\sin x = 0.20$, $\cos x = 0.98$, $\sin y = 0.12$, and $\cos y = 0.99$, which of the following is $\sin(x + y)$?

- A) 0.32
- B) 0.33
- C) 0.29
- D) 0.28

Solution. Recall that

$$\sin(x + y) = \sin x \cos y + \cos x \sin y.$$

Substituting values we get

$$\sin(x + y) = \sin x \cos y + \cos x \sin y = 0.20 * 0.99 + 0.98 * 0.12 = 0.3156 \approx 0.32.$$

Answer. A) $\sin(x + y) \approx 0.32$.