

$$\begin{aligned}a \cdot b &= 5 \cdot 2 \\ &= 10\end{aligned}$$

$$\begin{aligned}\Delta(a \cdot b) &= |a \cdot b| \sqrt{\left(\frac{\Delta a}{a}\right)^2 + \left(\frac{\Delta b}{b}\right)^2} \\ &= |10| \sqrt{0.05^2 + 0.25^2} \\ &= 2.54951\end{aligned}$$

$$\therefore a \cdot b = 10 \pm 2.54951$$

$$\begin{aligned}\sin(d) &= \sin(4) \\ &= -0.7568\end{aligned}$$

$$\begin{aligned}\Delta(\sin(d)) &= |\cos(d) \cdot \Delta d| \\ &= |-0.65364 \cdot 0.7| \\ &= 0.45755\end{aligned}$$

$$\therefore \sin(d) = -0.7568 \pm 0.45755$$

$$\begin{aligned}c \cdot \sin(d) &= 3 \cdot -0.7568 \\ &= -2.27041\end{aligned}$$

$$\begin{aligned}\Delta(c \cdot \sin(d)) &= |c \cdot \sin(d)| \sqrt{\left(\frac{\Delta c}{c}\right)^2 + \left(\frac{\Delta \sin(d)}{\sin(d)}\right)^2} \\ &= |-2.27041| \sqrt{0.04167^2 + 0.60458^2} \\ &= 1.37591\end{aligned}$$

$$\therefore c \cdot \sin(d) = -2.27041 \pm 1.37591$$

$$\begin{aligned}a \cdot b + c \cdot \sin(d) &= 10 + -2.27041 \\ &= 7.72959\end{aligned}$$

$$\begin{aligned}\Delta(a \cdot b + c \cdot \sin(d)) &= \sqrt{\Delta(a \cdot b)^2 + \Delta(c \cdot \sin(d))^2} \\ &= \sqrt{2.54951^2 + 1.37591^2} \\ &= 2.89709\end{aligned}$$

$$\therefore a \cdot b + c \cdot \sin(d) = 7.72959 \pm 2.89709$$

$$\begin{aligned}a \cdot b + c \cdot \sin (d) &= 10 + -2.27041 \\ &= 7.72959\end{aligned}$$

$$\begin{aligned}\Delta (a \cdot b + c \cdot \sin (d)) &= \sqrt{\Delta (a \cdot b)^2 + \Delta (c \cdot \sin (d))^2} \\ &= \sqrt{2.54951^2 + 1.37591^2} \\ &= 2.89709\end{aligned}$$

$$\therefore a \cdot b + c \cdot \sin (d) = 7.72959 \pm 2.89709$$