What is the phase angle for this trig function \( f(x) = 4 + 5 \sin(4\pi x - 3\pi) \)?

Recall the role the various parameters play in a trig function \( f(x) = K + A \sin(Bx + C) \):

- **K** = controls the upward or downward translation of the trig function. The line \( y = K \) is the center of the trig function’s graph.

- **A** = controls the amplitude or height of the trig function. The maximum and minimum of the trig function’s graph are at \( y = K + |A| \) and \( y = K - |A| \), respectively. If \( A < 0 \), then the graph has a reflection about the line \( y = K \).

- **B** = controls the period or cycle of the trig function. One period for the sine function = \( \frac{2\pi}{|B|} \).

- **C** = is called the **phase angle**. The value of \( C \) also controls the phase shift left or right of the trig function’s graph. The phase shift = \( \frac{C}{B} \). Note that if \( C/B < 0 \), the phase shift is to the right, and if \( C/B > 0 \), the phase shift is to the left.

So in this problem the phase angle is \(-3\pi\).