

OS PS4 Q2

- A) Observation: child's count is far smaller than number of signals sent
Why: Signals don't queue & the kernel maintains a Pending bit per signal #. If many SIGTERMs arrive while one is being handled, they all pile up into 1 single instance
- B) Because of SA_NOMASK the signal isn't blocked during its own handler. ∴ the signals pile up way faster than they unwind & under heavy load it can lead to a crash (SIGSEGV)
- C) Child survives & reports small count because the handled signal is masked during handling which prevents self interruption. Signals don't queue ∴ multiple sends collapse into 1 ∴ no piling up (deep nesting) ∴ child survives
- D) Reported count = signals sent because they are real-time signals which queue & preserve order ∴ the child closely tracks the actual # sent. this is only until you reach resource limits such as the queue limit.