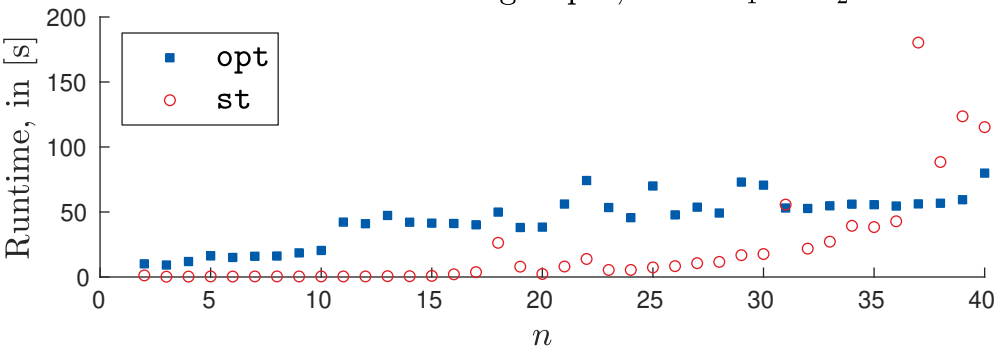


Worst-case runtime for group 1, with  $m_1 = m_2 = 2n$ .



Worst-case runtime for group 2, with  $m_1 = m_2 = 2n$ .

