

## Flow-shop problems with no wait

- **maximal polynomially solvable:**

$F2|no - wait|C_{max}$  Gilmore & Gomory (1964) [1], Reddi & Ramamoorthy (1972) [2]

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- **minimal NP-hard:**

- \*  $F2|r_i; no - wait|C_{max}$  Roeck (1984) [3]
  - \*  $F3|no - wait|C_{max}$  Roeck (1984A) [4]
  - \*  $F2|no - wait|L_{max}$  Roeck (1984) [3]
  - \*  $F2|no - wait|\sum C_i$  Roeck (1984) [3]
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- **minimal open:**

$F2|chains; no - wait|C_{max}$

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- **maximal open:**

$F2|prec; no - wait|C_{max}$

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## References

- [1] P.C. Gilmore and R.E. Gomory. Sequencing a one state-variable machine: A solvable case of the traveling salesman problem. *Oper. Res.*, 12:655–679, 1964.
- [2] S.S. Reddi and C.V. Ramamoorthy. On the flow-shop sequencing problem with no wait in process. *Operational Res. Quart.*, 23:323–331, 1972.
- [3] H. Röck. Some new results in flow shop scheduling. *Z. Oper. Res. Ser. A-B*, 28(1):1–16, 1984.
- [4] H. Röck. The three-machine no-wait flow shop is NP-complete. *J. Assoc. Comput. Mach.*, 31(2):336–345, 1984.