



**Number of processes:** 3

**Burst times:** 10, 5, 8

**Time slice:** 2

#### Initialization:

Process 1: burst\_time = 10, remaining\_time = 10, completed = 0

Process 2: burst\_time = 5, remaining\_time = 5, completed = 0

Process 3: burst\_time = 8, remaining\_time = 8, completed = 0

#### Execution Steps

##### Initial state:

Time: 0

Completed processes: 0

##### First Round:

Process 1 executes for 2 units of time.

Remaining time:  $10 - 2 = 8$

Time:  $0 + 2 = 2$

Process 2 executes for 2 units of time.

Remaining time:  $5 - 2 = 3$

Time:  $2 + 2 = 4$

Process 3 executes for 2 units of time.

Remaining time:  $8 - 2 = 6$

Time:  $4 + 2 = 6$

##### Second Round:

Process 1 executes for 2 units of time.

Remaining time:  $8 - 2 = 6$

Time:  $6 + 2 = 8$

Process 2 executes for 2 units of time.

Remaining time:  $3 - 2 = 1$

Time:  $8 + 2 = 10$

Process 3 executes for 2 units of time.

Remaining time:  $6 - 2 = 4$

Time:  $10 + 2 = 12$

##### Third Round:

Process 1 executes for 2 units of time.

Remaining time:  $6 - 2 = 4$

Time:  $12 + 2 = 14$

Process 2 executes for 1 unit of time (completes the process).

Remaining time:  $1 - 1 = 0$

Time:  $14 + 1 = 15$

Mark as completed, completion time: 15

Completed processes:  $0 + 1 = 1$

Process 3 executes for 2 units of time.

Remaining time:  $4 - 2 = 2$

Time:  $15 + 2 = 17$

##### Fourth Round:

Process 1 executes for 2 units of time.

Remaining time:  $4 - 2 = 2$

Time:  $17 + 2 = 19$

Process 3 executes for 2 units of time (completes the process).

Remaining time:  $2 - 2 = 0$

Time:  $19 + 2 = 21$

Mark as completed, completion time: 21

Completed processes:  $1 + 1 = 2$

##### Final Round:

Process 1 executes for 2 units of time (completes the process).

Remaining time:  $2 - 2 = 0$

Time:  $21 + 2 = 23$

Mark as completed, completion time: 23

Completed processes:  $2 + 1 = 3$

##### At the end of the execution:

Process 1 completed at time 23

Process 2 completed at time 15

Process 3 completed at time 21