

Test Case ID	Scenario	Input (Frame-by-Frame)	Expected Total Score
Test Case 01	All gutter balls (no pins knocked down)	Frame 1 to Frame 10: 0 pins on both first and second throw	0
Test Case 02	All ones	Frame 1 to Frame 10: 1 pin on first throw, 1 pin on second throw	20
Test Case 03	Spare in the first frame	Frame 1: 5 pins and 5 pins; Frame 2: 3 pins and 0 pins; Frame 3 to Frame 10: 0 pins each throw	16
Test Case 04	Strike in the first frame	Frame 1: 10 pins; Frame 2: 3 pins and 4 pins; Frame 3 to Frame 10: 0 pins each throw	24
Test Case 05	Perfect game (all strikes)	Frame 1 to Frame 9: 10 pins on the first throw; Frame 10: 10 pins, 10 pins, 10 pins (three throws)	300
Test Case 06	Spare in the last frame with bonus	Frame 1 to Frame 9: 0 pins both throws; Frame 10: 5 pins and 5 pins, bonus throw 5 pins	15
Test Case 07	Strike in the last frame with bonus throws	Frame 1 to Frame 9: 0 pins both throws; Frame 10: 10 pins, 5 pins, 5 pins	20
Test Case 08	Three consecutive strikes at the start	Frame 1: 10 pins; Frame 2: 10 pins; Frame 3: 10 pins; Frame 4: 3 pins and 4 pins; Frame 5 to Frame 10: 0 pins both throws	77
Test Case 09	Spare followed by a strike	Frame 1: 7 pins and 3 pins; Frame 2: 10 pins; Frame 3: 4 pins and 3 pins; Frame 4 to Frame 10: 0 pins both throws	44

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Test Case 10	Strike only in the last frame	Frame 1 to Frame 9: 0 pins both throws; Frame 10: 10 pins, 10 pins, 10 pins (all three throws)	30
Test Case 11	Spare only in the last frame	Frame 1 to Frame 9: 0 pins both throws; Frame 10: 7 pins and 3 pins, bonus throw 5 pins	15
Test Case 12	Random normal frames (no spares/strikes)	Frame 1: 4 pins and 5 pins; Frame 2: 3 pins and 4 pins; Frame 3: 2 pins and 6 pins; Frame 4: 5 pins and 3 pins; Frame 5: 4 pins and 5 pins; Frame 6: 2 pins and 7 pins; Frame 7: 3 pins and 5 pins; Frame 8: 1 pin and 8 pins; Frame 9: 2 pins and 4 pins; Frame 10: 3 pins and 6 pins	77
Test Case 13	Invalid input (pins greater than 10)	Any frame where the entered pins in one throw is more than 10	Error or Exception
Test Case 14	Invalid input (negative pins)	Any frame where the entered pins in one throw is negative	Error or Exception
Test Case 15	Invalid total pins exceeding 10	Any frame where the first and second throw together exceed 10 pins without a strike	Error or Exception