Risk-Based Priority Matrix

What RBPM Combines	1. Potential Risks from RTM (Requirement Traceability Matrix) 2. Risk Impact & Likelihood analysis 3. Business Criticality (Must-Have vs Should-Have) 4. Security & E-commerce Vulnerabilities from OWASP Top 10: https://owasp.org/Top10/2025/
Risk Score Formula	**Risk Score = (Impact Score) * (Likelihood Score)** Risk Factors: Impact (1-5), Likelihood (1-5) *The risk score is used as a guideline for relative test execution prioritization.*

	Critical (P0)	High (P1)	Medium (P2)	Low (P3)
Risk Levels	• Risk Score: 20 - 25 • Impact: Immediate business loss • Frequency: High • Fix urgency: ASAP	• Risk Score: 12 - 19 • Impact: Significant business disruption • Frequency: Medium • Fix urgency: High	• Risk Score: 6 - 11 • Impact: Moderate business impact • Frequency: Medium-Low • Fix urgency: Standard	• Risk Score: 1 - 5 • Impact: Low business impact • Frequency: Low • Fix urgency: Low

Risk Identification & Priority

Iteration 1 (Must-Have Requirements)

REQ ID	Potential Risks	MoSCoW	Impact	Likelihood	Risk Score	Priority
REQ-014	Authentication failure	Must-Have	5	4	20	P0
REQ-019	Payment processing failure	Must-Have	5	4	20	P0
REQ-022	Authentication failure	Must-Have	5	4	20	P0
REQ-021	Missing order records	Must-Have	5	3	15	P1
REQ-023	Unauthorized access	Must-Have	5	3	15	P1
REQ-001	Page load or routing failure	Must-Have	4	3	12	P1
REQ-004	Incorrect filtering logic	Must-Have	4	3	12	P1
REQ-008	Missing or incorrect product data	Must-Have	4	3	12	P1
REQ-009	Data inconsistency	Must-Have	4	3	12	P1
REQ-024	Invalid data creation	Must-Have	4	3	12	P1
REQ-025	Data inconsistency	Must-Have	4	3	12	P1
REQ-026	Residual data exposure	Must-Have	5	2	10	P2
REQ-002	Broken navigation link	Must-Have	3	3	9	P2
REQ-007	Broken product link	Must-Have	3	3	9	P2
REQ-016	Broken access flow	Must-Have	4	2	8	P2
REQ-017	Data persistence failure	Must-Have	4	2	8	P2
REQ-005	Filter state not reset	Must-Have	3	2	6	P2
REQ-006	User confusion due to empty results	Must-Have	2	3	6	P2
REQ-011	Session handling issues	Must-Have	3	2	6	P2

| REQ-012 | Homepage rendering issues | Must-Have | 3 | 2 | 6 | P2 |
| REQ-013 | Broken redirect | Must-Have | 3 | 2 | 6 | P2 |

Iteration 2 (Should-Have Requirements)

REQ ID	Potential Risks	MoSCoW	Impact	Likelihood	Risk Score	Priority
REQ-010	Session persistence failure	Should-Have	4	3	12	P1
REQ-020	Missing confirmation	Should-Have	4	3	12	P1
REQ-015	Improper error handling	Should-Have	3	3	9	P2
REQ-003	Incorrect access restriction	Should-Have	4	2	8	P2
REQ-027	Incorrect role assignment	Should-Have	4	2	8	P2
REQ-018	Session sync issues	Should-Have	3	2	6	P2

Risk Assessment & Mitigation Strategy

Security (Critical – P0)

1) Related Requirements:
   REQ-014, REQ-019, REQ-022
2) Risk Characteristics:
   - Authentication and payment processing failures
   - Direct risk of data breach, financial loss, and system compromise
3) Mitigation Strategy:
   1. Perform **API-level security testing** focusing on authentication, authorization, and payment endpoints
   2. Validate **access control, token handling, and data validation**
   3. Execute **targeted exploratory testing** around security edge cases and failure scenarios
   4. Treat all P0 defects as **release blockers** requiring immediate resolution

Functional Risks (P1 – High)

1) Related Requirements:
   REQ-021, REQ-023, REQ-001, REQ-004, REQ-008, REQ-009, REQ-024, REQ-025, REQ-010, REQ-020
2) Risk Characteristics:
   - Core business and transactional flows affected
   - Potential disruption to ordering, navigation, data integrity, and confirmation flows
3) Mitigation Strategy:
   1. Conduct **system testing and end-to-end testing**
   2. Validate **data consistency, persistence, and error handling** across integrated components
   3. Prioritize regression testing for areas with **frequent changes or dependencies**

Usability Risks (P2)

1) Related Requirements:
   REQ-026, REQ-002, REQ-007, REQ-016, REQ-017,
   REQ-005, REQ-006, REQ-011, REQ-012, REQ-013,
   REQ-015, REQ-003, REQ-027, REQ-018
2) Risk Characteristics:
   - Moderate impact on user experience and system stability
   - Workarounds generally available
   - Issues may affect usability, session behavior, and non-critical flows
3) Mitigation Strategy:
   1. Apply **exploratory and scenario-based testing** to uncover usability gaps and edge cases
   2. Perform **focused regression testing** on session handling, navigation, and UI behavior
   3. Execute P2 testing **after P0 and P1 stabilization**, time permitting within the sprint

Test Execution Priority	**Iteration 1 (Must-Have Requirements)**	**Iteration 2 (Should-Have Requirements)**
	P0 REQ-014, REQ-019, REQ-022 **P1** REQ-021, REQ-023, REQ-001, REQ-004, REQ-008, REQ-009, REQ-024, REQ-025 **P2** REQ-026, REQ-002, REQ-007, REQ-016, REQ-017, REQ-005, REQ-006, REQ-011, REQ-006, REQ-011, REQ-012, REQ-013	**P1** REQ-010, REQ-020 **P2** REQ-015, REQ-003, REQ-027, REQ-018