

UAS Calculations for Modern Aerial Dissemination - Learning Objectives

Objective #1

Action:

Identify key doctrinal constants for UAS leaflet dissemination.

Condition:

Given Tables D-1 through D-5 from the UAS Leaflet Drop doctrine and classroom instruction.

Associated Task or Educational Topic:

Introduction to UAS Aerial Dissemination Parameters

Standard:

Correctly identify and state the standard doctrinal constants, including descent rate (2.5 ft/s), spread factors (0.2-0.4), and standard UAS speed (17 knots) with 100% accuracy.

General Learning Outcomes (GLO) Supported:

Establish foundational technical knowledge for PSYOP planners.

Domain and Mastery Level:

Cognitive - Knowledge

Criticality Standard:

Essential - Required for all subsequent calculation tasks.

Objective #2

Action:

Calculate required metrics for leaflet descent and drift parameters.

Condition:

Given altitude above ground level (AGL), UAS airspeed, wind data, and doctrinal constants from Tables D-1 through D-3.

Associated Task or Educational Topic:

Basic UAS Dissemination Calculations

Standard:

Accurately calculate descent time, forward drift, and lateral wind drift with no more than 5% error from expected results.

GLO Supported:

Enable PSYOP planners to determine fundamental dissemination parameters.

Domain and Mastery Level:

Cognitive - Application

Criticality Standard:

Critical - Forms the foundation for all targeting calculations.

Objective #3

Action:

Calculate compound drift metrics for leaflet dispersion patterns.

Condition:

Given calculated descent time, forward drift, and lateral wind drift values from previous calculations.

Associated Task or Educational Topic:

Advanced Drift Calculations

Standard:

Correctly calculate total drift distance, major axis, and minor axis of the dispersion ellipse with no more than 10% error.

General Learning Outcomes (GLO) Supported:

Determine precise dispersion patterns for MISO product delivery.

Domain and Mastery Level:

Cognitive - Analysis

Criticality Standard:

Critical - Defines the actual coverage area for psychological operations.

Objective #4**Action:**

Calculate leaflet density metrics for operational effectiveness.

Condition:

Given dispersion ellipse dimensions and quantity of leaflets to be disseminated.

Associated Task or Educational Topic:

Density and Effectiveness Analysis

Standard:

Accurately calculate area coverage and resulting leaflet density with no more than 15% error, applying the appropriate formulas for elliptical area.

GLO Supported:

Ensure sufficient saturation for psychological effectiveness.

Domain and Mastery Level:

Cognitive - Analysis/Evaluation

Criticality Standard:

Critical - Determines if the planned dissemination will achieve desired psychological effect.

Objective #5**Action:**

Develop an integrated flight plan for SUAS leaflet dissemination operations.

Condition:

Given all calculated metrics (drift distances, dispersion patterns, density requirements) and a specific tactical target area.

Associated Task or Educational Topic:

SUAS Flight Planning for MISO Operations

Standard:

Produce a comprehensive flight plan that includes properly calculated release points, optimal flight altitude, and flight path to achieve desired target coverage.

General Learning Outcomes (GLO) Supported:

Translate technical calculations into actionable flight parameters.

Domain and Mastery Level:

Cognitive - Synthesis

Criticality Standard:

Critical - Final operational product that enables mission execution.

Objective #6

Action:

Adapt MISO product design for SUAS aerial dissemination.

Condition:

Given standard PSYOP products, SUAS dissemination capabilities/limitations, and calculated dispersion metrics.

Associated Task or Educational Topic:

MISO Product Integration with Technical Parameters

Standard:

Successfully modify or select MISO products that account for the technical constraints of SUAS dissemination while maintaining psychological effectiveness.

General Learning Outcomes (GLO) Supported:

Ensure technical delivery methods enhance rather than diminish PSYOP effects.

Domain and Mastery Level:

Cognitive - Evaluation/Synthesis

Criticality Standard:

Critical - Bridges the gap between technical calculations and psychological impacts.

Objective #7**Action:**

Execute practical application exercises to reinforce UAS calculation skills.

Condition:

Given complex scenarios with multiple variables and time constraints that simulate operational conditions.

Associated Task or Educational Topic:

Applied Lab Exercises

Standard:

Demonstrate proficiency in all calculation methods by completing practical exercises with at least 80% accuracy within the allotted timeframe.

General Learning Outcomes (GLO) Supported:

Develop calculation fluency under operational conditions.

Domain and Mastery Level:

Cognitive - Application/Analysis

Criticality Standard:

Critical - Builds speed and accuracy needed for time-sensitive operations.