

071-COM-1018
Determine Grid Azimuth using a Protractor
Status: Approved

Security Classification: U - Unclassified

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the G2, Ft Benning, GA 31905 foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Conditions: You are a member of a squad or team that has received an order requiring movement. You have been directed to determine the grid azimuth from the starting point and ending point designated in the order. You have a 1:50,000-scale military map, a military protractor (GTA 05-02-012), a pencil, and paper. Some iterations of this task should be performed in MOPP 4.

Standards: Identify the starting point and ending point on the map, draw a straight line on the map connecting the points, align the protractor to the map, and determine the value of the angle.

Special Conditions: None

Safety Risk: Low

MOPP 4: Sometimes

Task Statements

Cue: None

DANGER

None

WARNING

None

CAUTION

None

Remarks: None

Notes: None

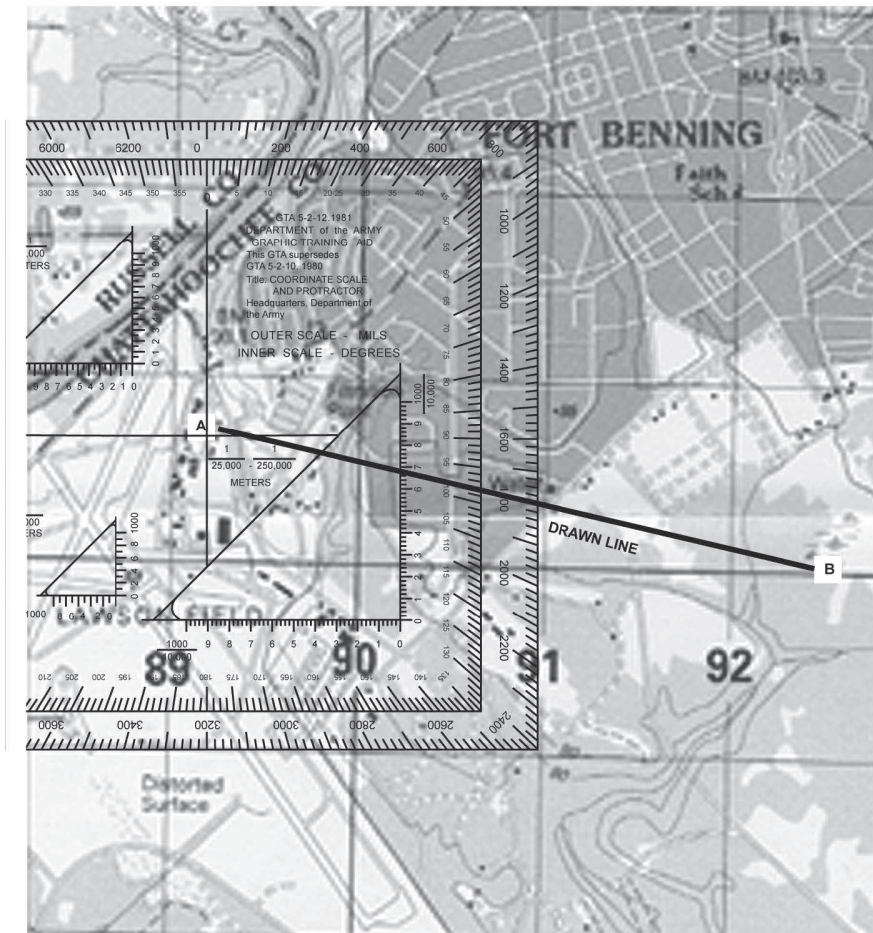


Figure 1.
Measuring an azimuth.

Performance Steps

1. Identify the starting point (A) on the map. (Figure 1)

2. Identify the ending point (B) on the map. (Figure 1)

Note: When measuring azimuths on a map, remember that you are measuring from a starting point to an ending point. If a mistake is made and the reading is taken from the ending point, the grid azimuth will be 180 degrees off, thus causing the user to go in the wrong direction.

3. Draw a straight line on the map connecting the two points.

Note: To ensure an accurate measurement the line should extend past the starting point and ending point.

4. Align the protractor (Figure 2) to the map. (Figure 1)

Note: When using the protractor, the base line is always oriented parallel to a north-south grid line. The 0- or 360-degree mark is always toward the top or north on the map and the 90-degree mark is to the right.

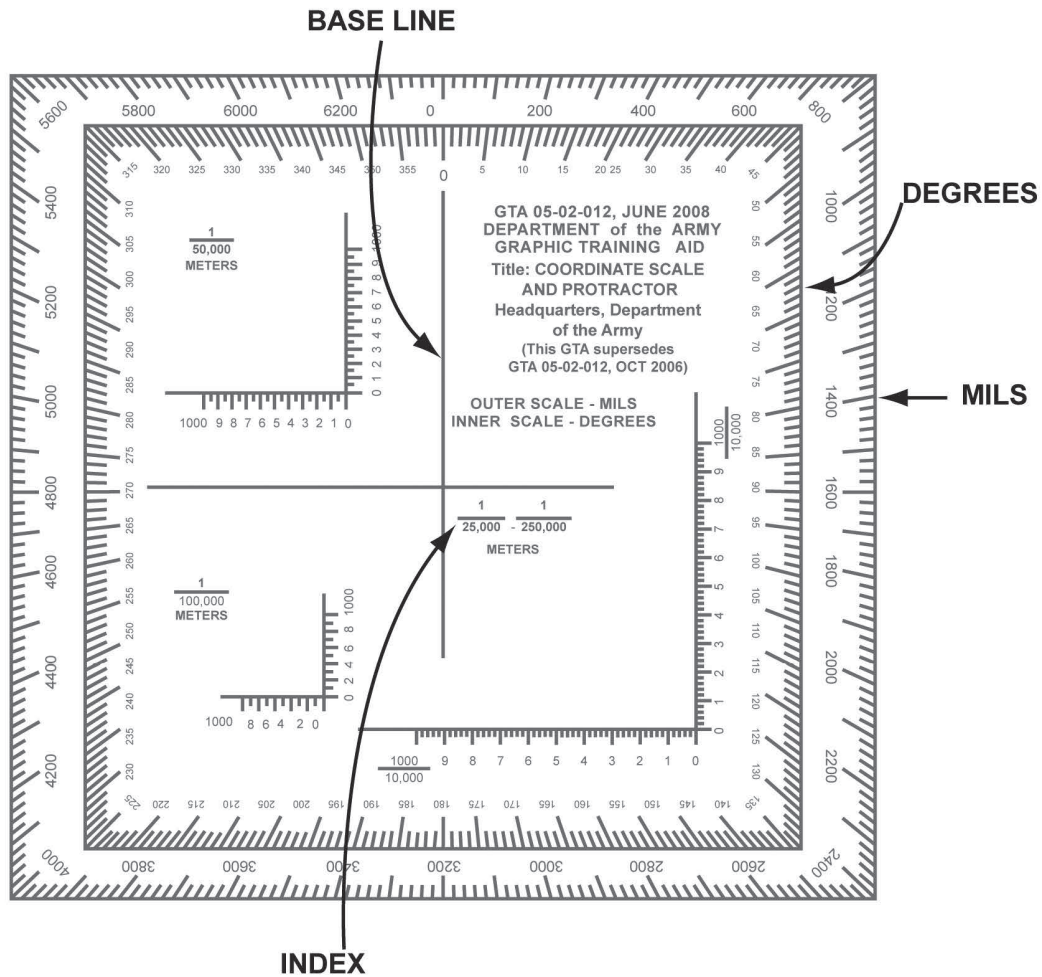


Figure 2.
Protractor.

- a. Place the index of the protractor at the point where the drawn line crosses a vertical (north-south) grid line.
- b. Align the 0- to 180-degree line of the protractor on the vertical grid line, while keeping the index in position.

5. Determine the value of the angle (grid azimuth) from the scale.

Note: The grid azimuth is the degrees/mils value where the azimuth line crosses the protractor scale.

- a. Identify where the line crosses the protractor scale.
- b. Read the value (degrees or mils) where the line intersects with the scale.

Note: This value is the grid azimuth.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier scores a NO-GO, show the Soldier what was done wrong and how to do it correctly.

Evaluation Preparation: Setup: Provide the Soldier with the equipment and materials described in the conditions statement. Brief the Soldier: Tell the Soldier what is required to successfully complete the task by reviewing the conditions and standards. Stress the importance of observing cautions, warnings, and dangers, as applicable.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Identified the starting point on the map.			
2. Identified the ending point on the map.			
3. Drew a straight line on the map connecting the two points.			
4. Aligned the protractor to the map.			
5. Determined the value of the angle.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary	Source Information
	TC 3-25.26	MAP READING AND LAND NAVIGATION (https://armypubs.us.army.mil/doctrine/DR_pubs/dr_c/pdf/tc3_25x26.pdf)	Yes	No	

TADSS :

TADSS ID	Title	Product Type
GTA 05-02-012	Coordinate Scale and Protractor	GTA

Equipment Items (LIN): None

Materiel Items (NSN) :

Step ID	NSN	LIN	Title	Qty
	6515-00-612-0000		Pencil	1
	7643-01-404-4393		Topo, MC&G Products	1
	6675-01-431-5541		Scale, Drafting	1

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card.

Safety: In a training environment, leaders must perform a risk assessment in accordance with current Risk Management Doctrine. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW current CBRN doctrine.

Prerequisite Individual Tasks : None

Supporting Individual Tasks :

Task Number	Title	Proponent	Status
071-COM-1012	Orient a Map to the Ground by Map-Terrain Association	071 - Infantry (Individual)	Approved
071-COM-1005	Determine a Location on the Ground by Terrain Association	071 - Infantry (Individual)	Approved
071-COM-1011	Orient a Map Using a Lensatic Compass	071 - Infantry (Individual)	Approved

Supported Individual Tasks : None

Supported Collective Tasks : None

Knowledges :

Knowledge ID	Knowledge Name
071-NAV-0027	Military Grid Reference System
071-NAV-0033	Distance Measuring Techniques

071-NAV-0032	Azimuths
071-NAV-0031	Topographic Symbols
071-NAV-0030	Grid Magnetic Angle

Skills :

Skill ID	Skill Name
071-900-0003	Read a Protractor
071-NAV-0011	Identify Terrain Features on a Map
071-NAV-0010	Identify Topographical Symbols on a Map
071-NAV-0006	Determine a Location on the Ground by Terrain Association
071-NAV-0003	Ability to Read a Map
071-NAV-0004	Determine Direction with a Compass

ICTL Data : None