

UNITED STATES MARINE CORPS
Infantry Training Battalion
School of Infantry
Camp Pendleton C.A. 92055-5081
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ANTI-ARMOR RANGE CARD

AT1003

Student Handout

ANTI-TANK MISSILEMAN COURSE

M10T2B2

03 APR 2004

LEARNING OBJECTIVES.

a. **TERMINAL LEARNING OBJECTIVE.**

(1) Given a designated position, sector of fire, lensatic compass, anticipated target engagement area, target reference points, and writing materials, prepare an anti-armor range card by developing a card which contains each of the required items. (52TR.01.02)

b. **ENABLING LEARNING OBJECTIVES.**

(1) Given a designated location and writing materials, develop a terrain sketch in accordance with FM 23-34 (52TR.01.02a)

(2) Given a designated location, lensatic compass, and writing materials illustrate the weapons position in accordance with FM 23-34. (52TR.01.02b)

(3) Given a designated location, sector of fire, lensatic compass, and writing materials, illustrate distance and back azimuth to a known point in accordance with FM 23-34. (52TR.01.02c)

(4) Given a designated location, sector of fire, lensatic compass, and writing materials, illustrate left and right lateral limits in accordance with FM 23-34 (52TR.01.02d)

(5) Given a designated location, sector of fire, lensatic compass, and writing materials, illustrate minimum and maximum engagement lines in accordance with FM 23-34 (52TR.02.02e)

(6) Given a designated location, sector of fire, lensatic compass, and writing materials, illustrate dead space in accordance with FM 23-34. (52TR.01.02f)

(7) Given a designated location, sector of fire, anticipated target engagement area, lensatic compass, and writing materials, illustrate anticipated target engagement areas in accordance with FM 23-34. (52TR.01.02g)

(8) Given a designated location, sector of fire, anticipated target engagement area, lensatic compass, and writing materials, illustrate target reference points in accordance with FM 23-34. (52TR.01.02h)

(9) Given a designated location, sector of fire, an anticipated target engagement area, target reference points, lensatic compass, and writing materials, annotate marginal data in accordance with FM 23-34. (52TR.01.02i)

(10) Given a designated location, lensatic compass, and writing materials, illustrate magnetic north in accordance with FM 23-34. (52TR.01.02j)

1. **RANGE CARD.** A range card is a sketch of the terrain that a weapon has been assigned to cover by fire. It contains information that assists in the planning and controlling of fire, the rapid detection and engagement of targets, and the orientation of replacement personnel or units. By using a range card, a gunner can quickly and accurately determine the information he needs to engage targets.

2. **PREPARING A RANGE CARD.** You will always make two range cards. One is kept at the firing position and one is given to the squad or section leader for preparation of fire plans and final coordination of fires with higher headquarters.

a. **Sector Sketch.** Draw a sketch of the entire sector you are assigned to cover. Make the sketch as legible as possible. Be sure to include all natural and manmade terrain features. Place the weapon symbol (TOW or Javelin) in the appropriate position on the sector sketch. Draw a line, with multiple arrows on the line, pointing from a known point to the body of the weapon symbol. Label your known point and include distance in meters and azimuth in degrees on the line. The known point serves as an easy reference for supply or other friendly units to locate you (See Figure 9-1).

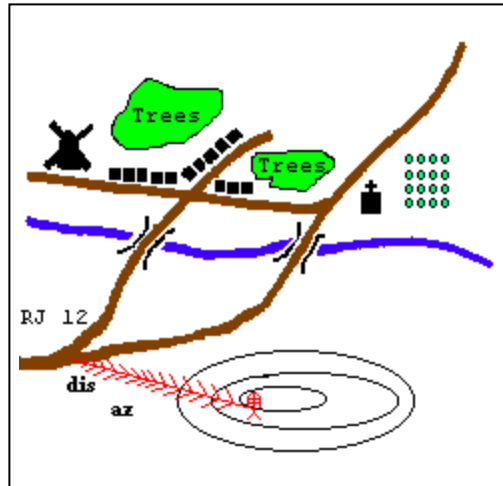


Figure 9-1

b. **Sector of Fire.** Sectors of fire are assigned to ensure that the weapon systems will cover target approaches. Leaders should strive to overlap sectors to cover areas that cannot be engaged by one system. The leader gives a gunner left and right limits indicated by azimuths. Draw lines from the weapon position to show the right and left lateral limits (See Figure 9-2).

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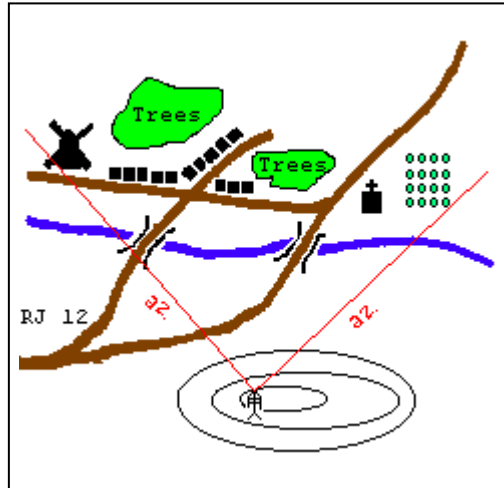


Figure 9-2

c. Maximum Engagement Line. The maximum engagement line is a line beyond which a target cannot be engaged. This line may be closer than the maximum engagement of the weapon. It depends on the terrain and is labeled Maximum Engagement Line (See Figure 9-3).

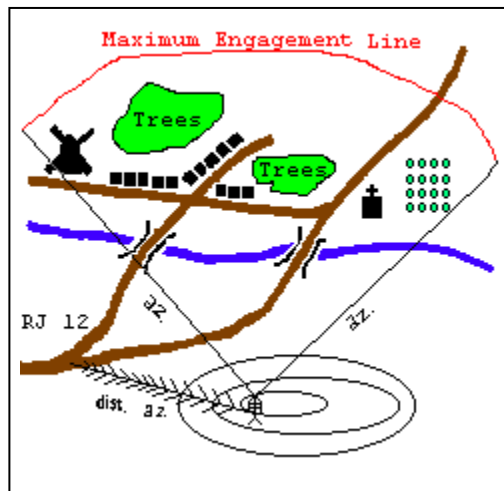


Figure 9-3

d. Anticipated Target Engagement Areas. Indicate the enemy avenues of approach. Your leader may also designate these locations within your sector of fire. Roads, tree lines, etc indicate these locations. To indicate an anticipated target engagement area, draw a bold, open-end arrow, along the assumed enemy route of march and label it as anticipated target engagement area. (See Figure 9-4).

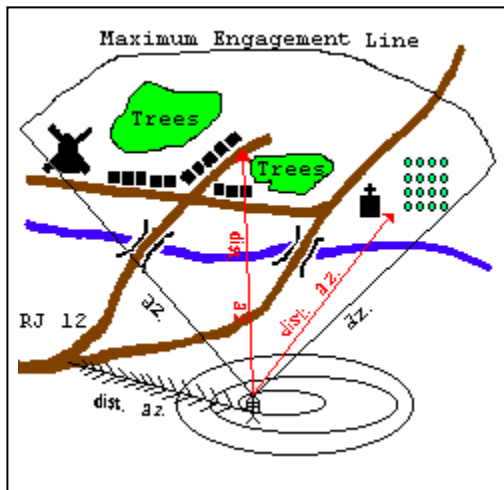


Figure 9-4

e. Target Reference Points (TRP's). TRP's are man made or natural terrain features located in the target area that will enable higher headquarters to coordinate fires. The squad will receive the designation from the section or platoon leader. Each TRP will be given a name, letter/number designator and also a range to the TRP in meters, plus azimuth in degrees. It also will have a line with a solid arrow tip (See Figure 9-5).

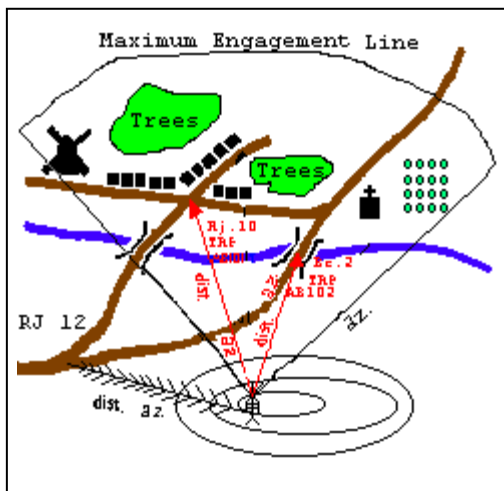


Figure 9-5

f. Dead Space. This is natural or man made terrain features on which direct fires can not be placed. Place diagonal lines and the words "dead space" where dead space occurs (See Figure 9-6).

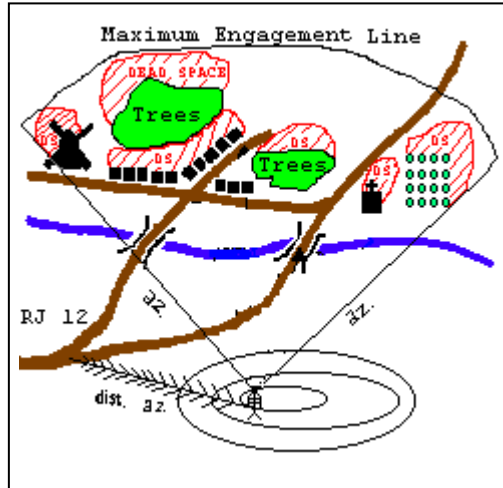


Figure 9-6

g. Magnetic North. Indicates magnetic north on the range card by orienting the range card with the compass and tracing a line down the straight edge of the compass. Put half an arrowhead tip on the left side of the line and letter the bottom of the line with an "N" (See Figure 9-7).

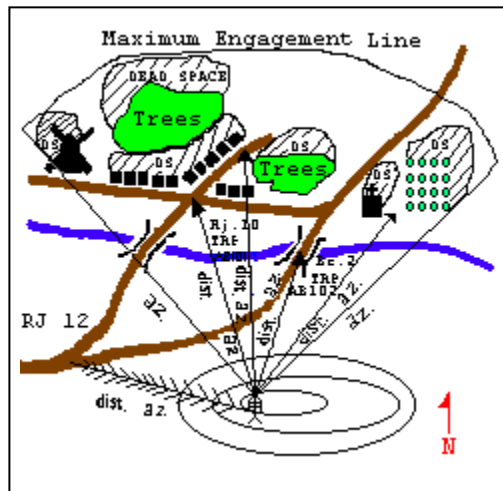


Figure 9-7

h. Marginal Data

- (1) Type of position. Primary, alternate, or supplementary.
- (2) Unit description. Never indicate your unit higher than your company.
- (3) Date/time. The actual date and time you completed the range card.

