

MLEP Intermediate GPS Workshop

Exercise One

Calibrating and Calculating Coordinates

Using “Side A” of the Exercise One Handout complete the following:

Calibrate your ruler to the latitude (the grid lines on the right or left side of the grid):

1 inch equals _____ increment of latitude

Calibrate your ruler to the longitude (the grid lines across the top or bottom of the grid):

1 inch equals _____ increment of longitude

What is the latitude of point A? _____

What is the longitude of point A? _____

The coordinates for point A are? _____

What is the latitude of point B? _____

What is the longitude of point B? _____

The coordinates for point B are? _____

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Using "Side B" of the Exercise One Handout complete the following:

How many seconds are there in a minute? _____

How many minutes are there in a degree? _____

$N25^{\circ} 53' 56'' + 82'' =$ _____

$W97^{\circ} 29' 46'' + 2' \text{ and } 73'' =$ _____

Calibrate your ruler to the latitude (the grid lines on the right or left side of the grid):

1 inch equals _____ minutes

1 inch equals _____ seconds

1/16 inch equals _____ seconds (120 seconds \div 16)

Calculate the latitude of point C (Hint - Because it is easier to add than subtract, use the reference grid line that is below the point for calculating latitude):

How many 1/16ths are there from the reference grid line to point C?

How many seconds are there from the reference grid line to point C?

What is the latitude of point C ($N 47^{\circ} 04' 00'' +$ ____ seconds)?

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1/16 inch equals _____ seconds (120 seconds ÷ 16)

What is the longitude of point C ($W\ 94^{\circ}\ 26'\ 00'' +$ _____ seconds)?

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Calculate the latitude of point D:

How many $\frac{1}{16}$ ths are there from the reference grid line to point D?

How many seconds are there from the reference grid line to point D?

What is the latitude of point D (N 47° 04' 00" + ____ seconds)?

Calculate the longitude of point D:

How many $\frac{1}{16}$ ths are there from the reference grid line to point D?

How many seconds are there from the reference grid line to point D?

What is the longitude of point D ($W 94^{\circ} 26' 00'' + \underline{\hspace{1cm}}$ seconds)?

The coordinates for point D are? N _____
W _____