

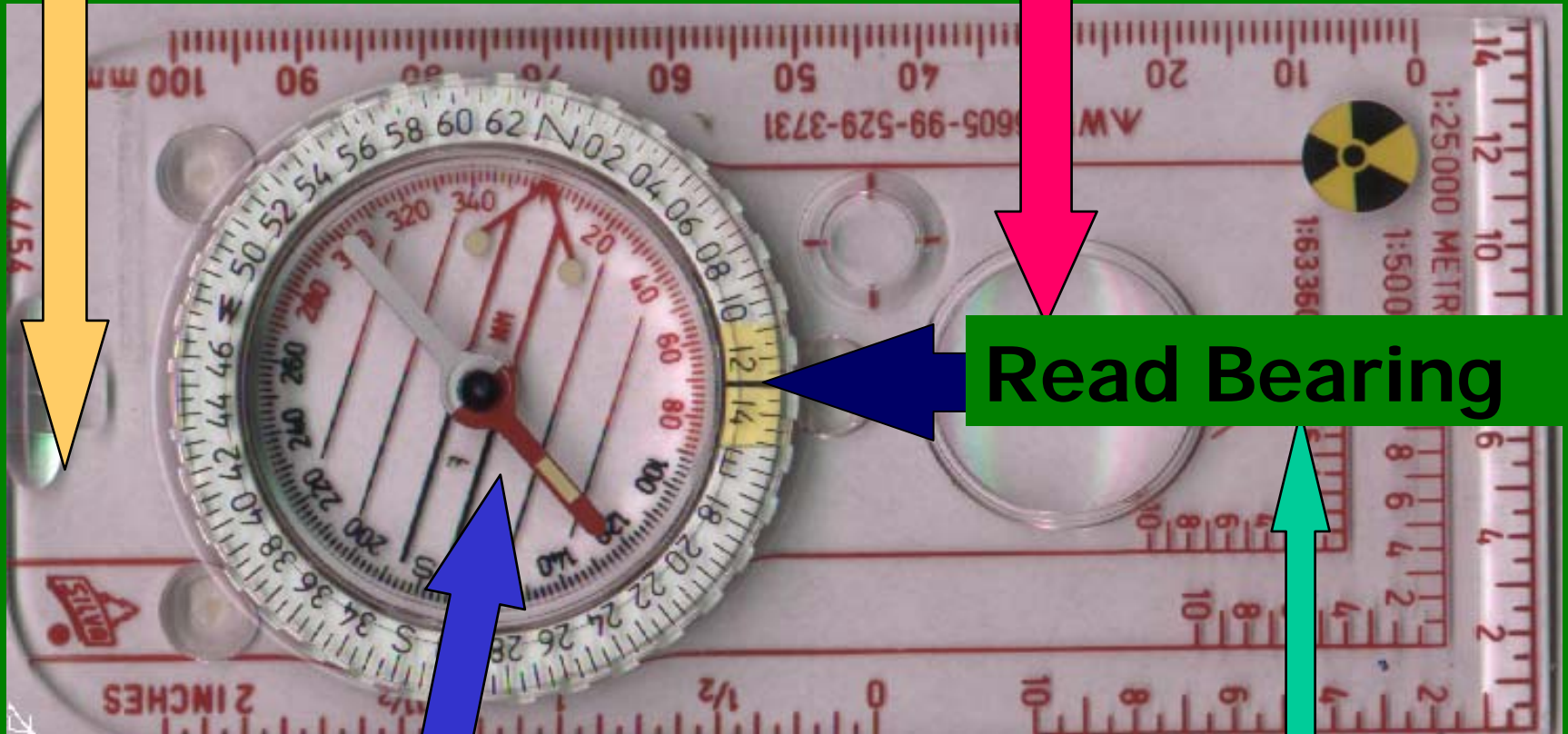


# Introduction to The Lightweight Compass

The Silva Compass



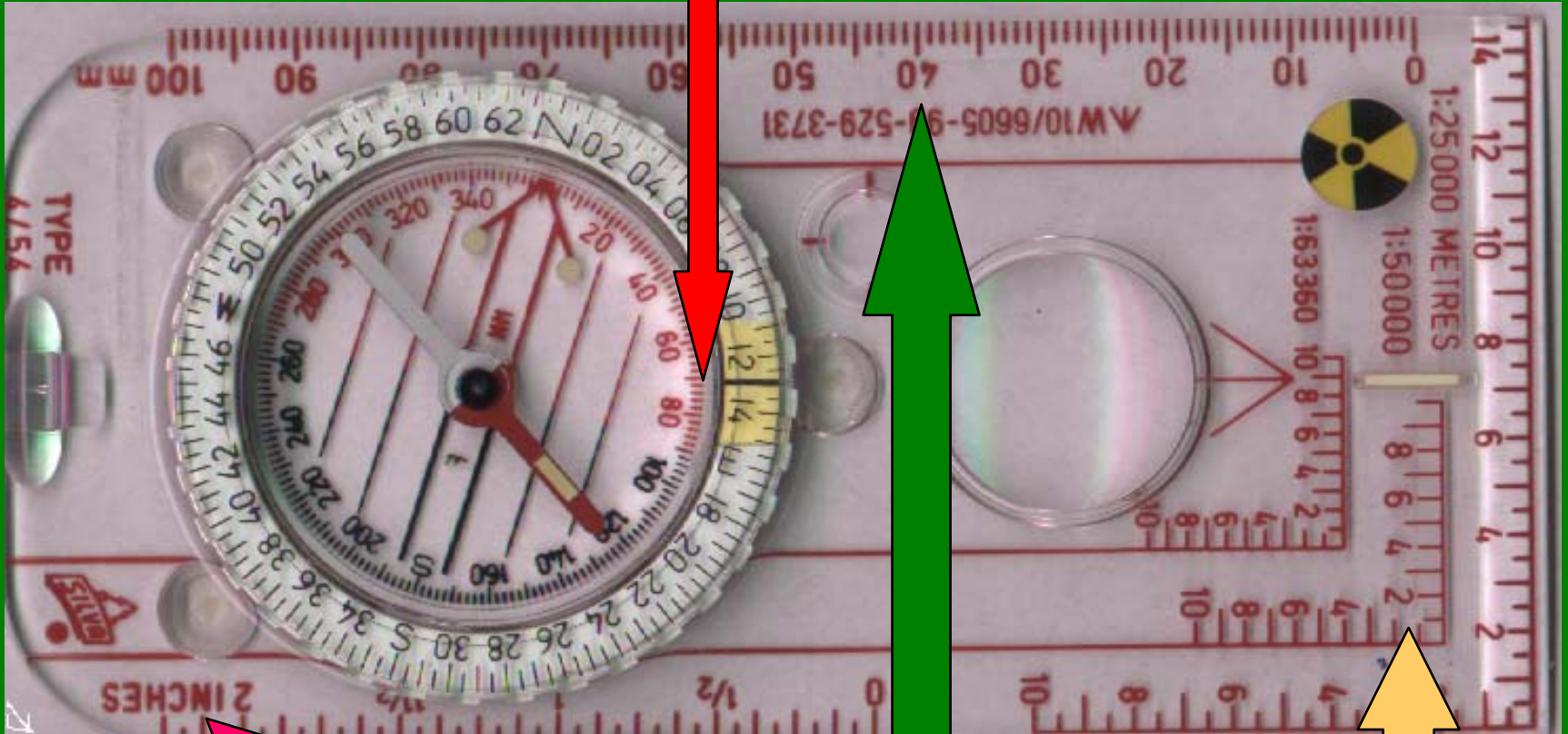
# Base Plate Magnifying Glass



Read Bearing

Compass Housing with Direction of  
Magnetic Needle Travel Arrow

# Read Degrees

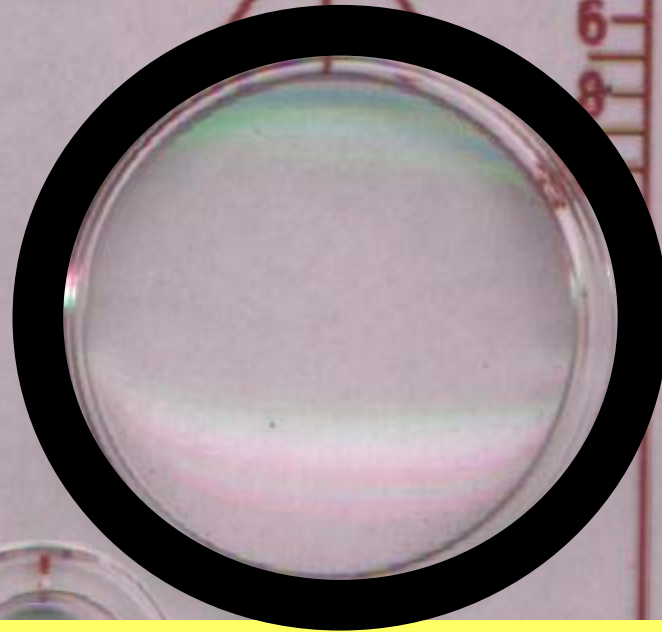


Ruler  
Inches

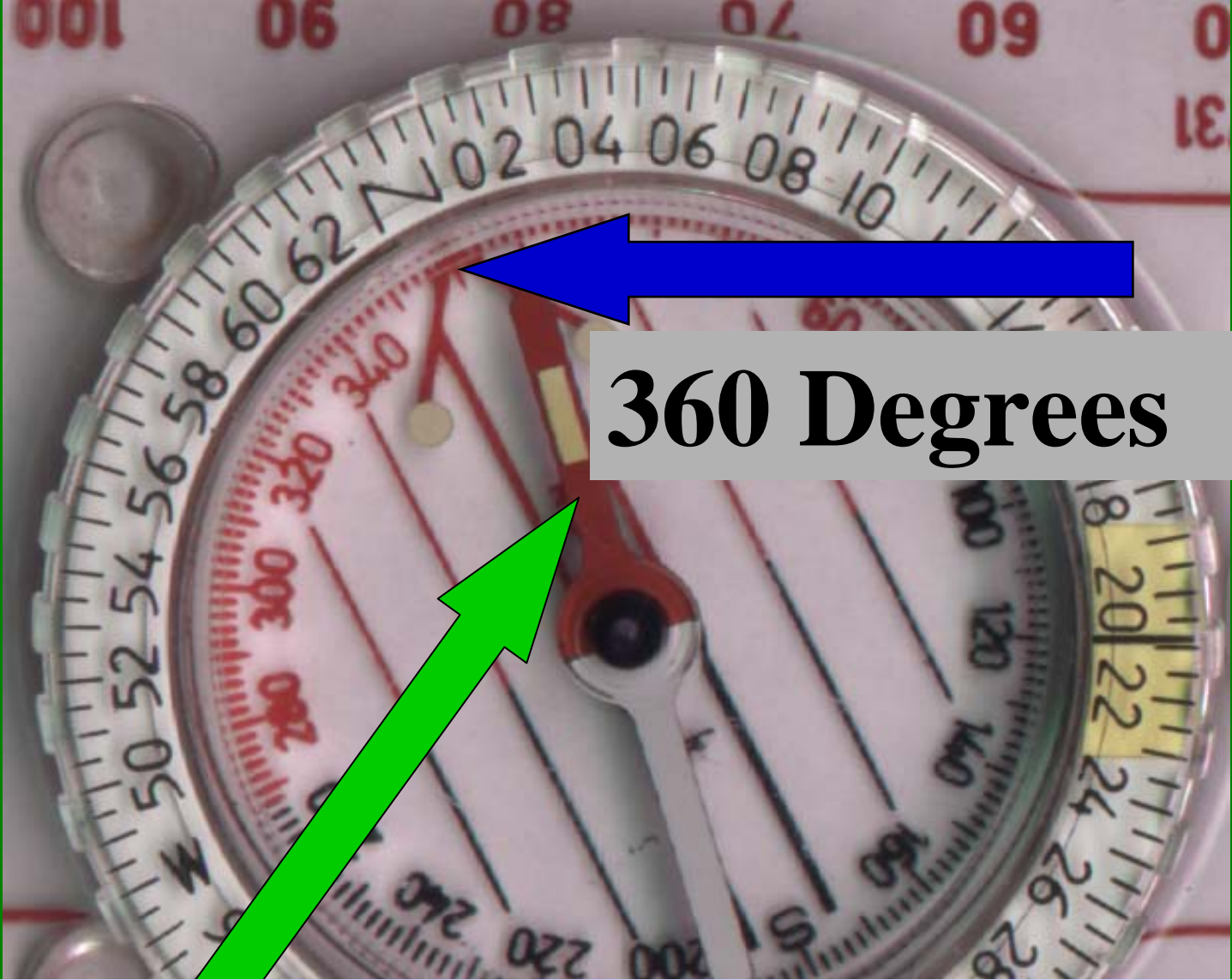
Ruler cms

Romers

**Romer**



**Magnifying Glass**



**360 Degrees**

**Magnetic Needle**



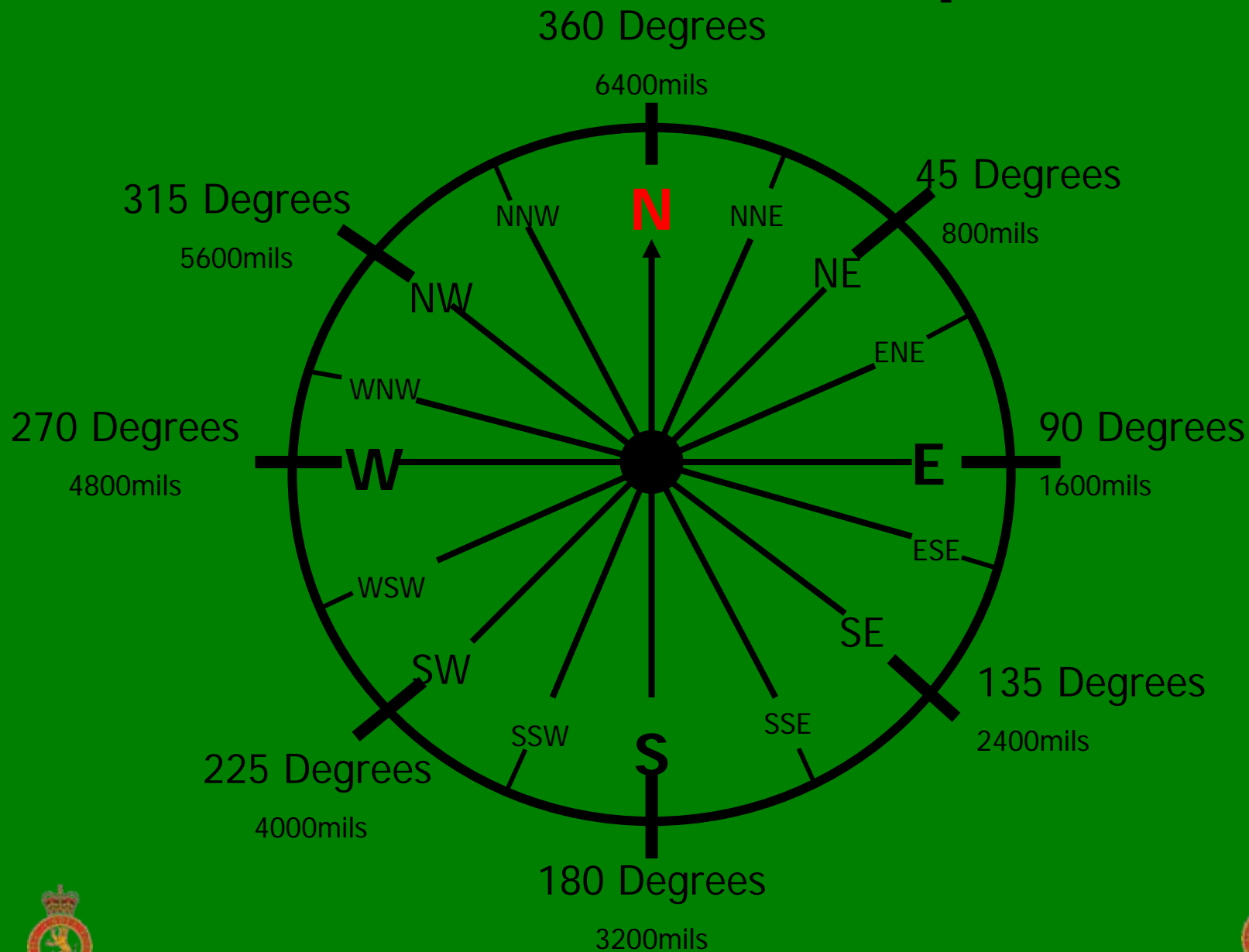
**Luminous Point  
Read Bearing**

**Aluminous Dots**

# Points of the Compass



# Points of the Compass



# Degree System

- Degrees are now used in **all** ACF map reading
- Sign for degrees is e.g.  $360^\circ$
- $360^\circ$  degrees in a circle
- 60 minutes in a degree
- Four Cardinal Points
- North, South, East, and West (N,S,E,W)



# Degree System

- Intermediate Points – NE,SE,SW,NW
- North =  $360^{\circ}$
- East =  $90^{\circ}$
- South =  $180^{\circ}$
- West =  $270^{\circ}$



# The Mils System

- Cadets now use the **Degree System** to keep in line with schools and the D of Ed Scheme
- Standard military system to divide the circle of a compass into 6400 mils
- 0 or 6400mils is at the North Point
- There is 18 mils in a degree
- May be used as an interest period at 4 star



# North Points & Bearings

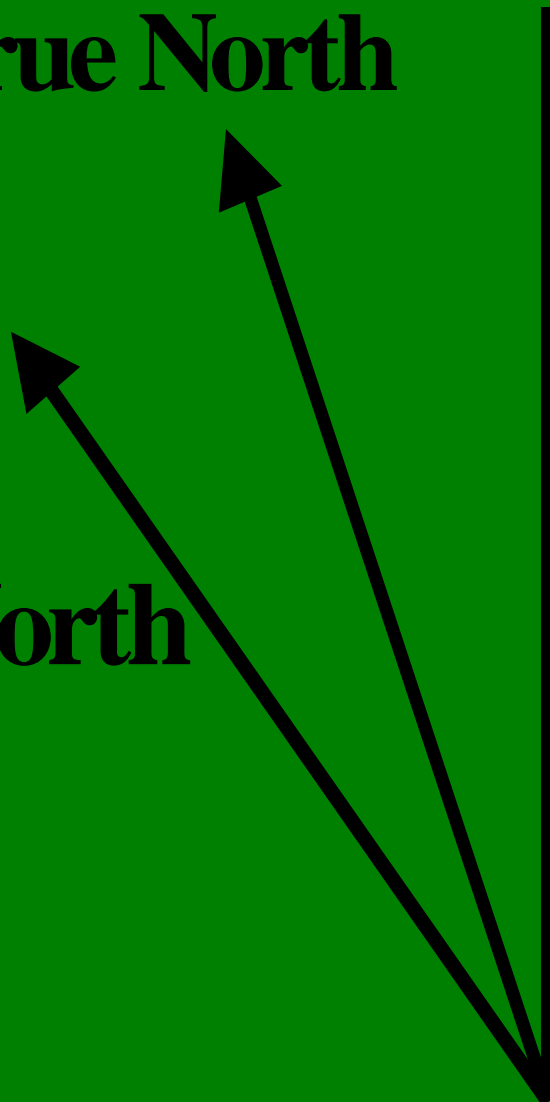


# North Points

## Grid North

## True North

## Magnetic North



# North Points

- There are 3 North Points that we use:
- **True North** – the actual distance of the geographical North Pole
- **Grid North** – The direction of the Vertical Grid Lines on a map. *For all purposes True North and Grid North are the same*
- **Magnetic North** – The direction towards which the compass needle is attracted is the **Magnetic North Pole**



# North Points

- **Grid Magnetic Angle (GMA)** – This is *(sometimes called the magnetic variation)* the angle between **Grid North** and **Magnetic North** (1 on diagram)
- It depends on Two Factors:
- (a) **Time:** - As the position of Magnetic North pole moves slightly eastwards



## North Points

- **GMA**: changes as it moves east
- This is called **Annual Magnetic Change**
- This must be taken into account when **converting** magnetic bearings to Grid Bearings and vice versa
- (b) **Place** – The GMA also varies from one part of the country to another
- These 2 factors included in the **marginal information**



## North Points

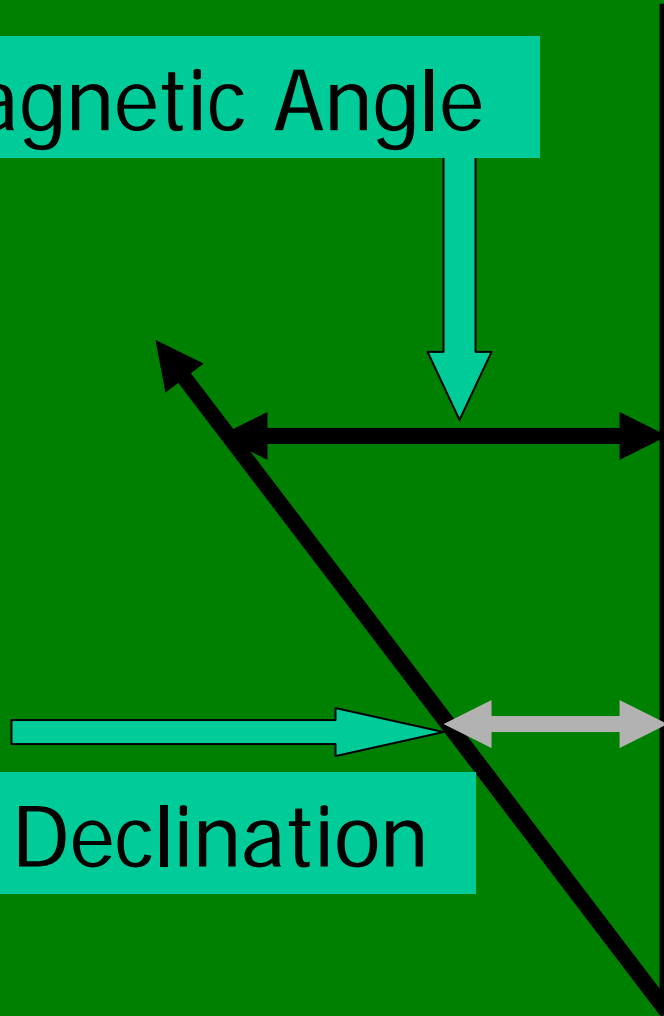
- **Grid Magnetic Angle (GMA)** – This is the angle between **Grid North** and **Magnetic North** as shown in the next diagram (1)
- **Magnetic Declination** – This is the angle between **Magnetic** and **True North** as shown in the next diagram (2)



# Angles Between North Points

1 Grid Magnetic Angle

2 Magnetic Declination



Any Questions on

# North Points and Bearings





**The End**

**The End**



**Presented by**

**"Come on the Micks"**

