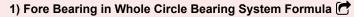
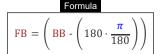
## Important Compass Surveying Formulas PDF



# List of 10

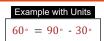
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Evaluate Formula

#### Included Angle when Bearings are Measured in Opposite Side of Common Meridian Formula 🕝







### 4) Included Angle when Bearings are Measured in Same Side of Different Meridian Formula [7]



$$\left(180 \cdot \frac{\pi}{180}\right) - \left(\alpha + \beta\right)$$



$$\theta = \left(180 \cdot \frac{\pi}{180}\right) - \left(\alpha + \beta\right) \left[60^{\circ} = \left(180 \cdot \frac{3.1416}{180}\right) - \left(90^{\circ} + 30^{\circ}\right)\right]$$

#### 5) Magnetic Bearing given True Bearing with East Declination Formula C

Example with Units 
$$55^{\circ} = 60^{\circ} - 5^{\circ}$$



#### 6) Magnetic Bearing given True Bearing with West Declination Formula 🕝



Example with Units 
$$65^{\circ} = 60^{\circ} + 5^{\circ}$$

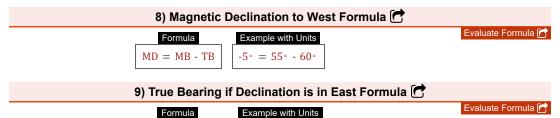


#### 7) Magnetic Declination to East Formula 🕝

Formula MD = TB - MB

Example with Units 
$$5^{\circ} = 60^{\circ} - 55^{\circ}$$

Evaluate Formula





 $60^{\circ} = 55^{\circ} + 5^{\circ}$ 



TB = MB + MD

Evaluate Formula [

# Variables used in list of Compass Surveying Formulas above

- **BB** Back Bearing (Radian)
- **FB** Fore Bearing (Radian)
- MB Magnetic Bearing (Degree)
- MD Magnetic Declination (Degree)
- **TB** True Bearing (Degree)
- α Fore Bearing of Previous Line (Degree)
- β Back Bearing of Previous Line (Degree)
- θ Included Angle (Degree)
- θ' Included Angle when Bearings are in Opposite Side (Degree)

# Constants, Functions, Measurements used in list of Compass Surveying Formulas above

- constant(s): pi,
   3.14159265358979323846264338327950288
   Archimedes' constant
- Measurement: Angle in Radian (rad), Degree (°)
   Angle Unit Conversion

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