

WHICH WAY TO STEER?



SOLVING THE WIND TRIANGLE

Name _____

Class _____

OBJECTIVE

Demonstrate an understanding of how to determine a wind correction angle by using the wind triangle method.

MATERIALS (Per Student)

- Paper
- Protractor
- Straightedge or ruler

$$TC \pm MV = MC$$

$$MC \pm DEV = CH$$

For (Magnetic)	N	30	60	E	120	150
Steer (Compass)	0	28	57	86	117	148
For (Magnetic)	S	210	240	W	300	330
Steer (Compass)	180	212	243	274	303	332

Editorial credit: Pilot's Handbook of Aeronautical Knowledge

QUESTIONS

Given the equations above, the provided compass deviation card, and the following information, determine the compass heading necessary to fly the intended course to the planned destination and the resulting groundspeed. Fill in as many intermediate steps as necessary to show your work.

Scenario 1:

Planned true course: 080 degrees

Forecast winds aloft: 040 at 40 knots

Planned airspeed: 160 knots

Magnetic variation: 6 degrees East

Solution:

A. True heading: _____

B. Wind correction angle: _____

C. Magnetic course: _____



- D. Compass deviation: _____
- E. Compass heading: _____
- F. Groundspeed: _____

Scenario 2:

Planned true course: 140 degrees
 Forecast winds aloft: 090 at 30 knots
 Planned airspeed: 120 knots
 Magnetic variation: 10 degrees West
 Solution:

- A. True heading: _____
- B. Wind correction angle: _____
- C. Magnetic course: _____
- D. Compass deviation: _____
- E. Compass heading: _____
- F. Groundspeed: _____

Scenario 3:

Planned true course: 230 degrees
 Forecast winds aloft: 090 at 30 knots
 Planned airspeed: 120 knots
 Magnetic variation: 5 degrees West
 Solution:

- A. True heading: _____
- B. Wind correction angle: _____
- C. Magnetic course: _____
- D. Compass deviation: _____
- E. Compass heading: _____
- F. Groundspeed: _____

