# Field-book exercise

Closed traverse A–B–C–D–A. Start at N 1000.000 m, E 500.000 m. Bearings reference grid north. Use horizontal distances.

| Course | Bearing | Distance (m) |
|---|---|---|
| A to B | N 30° E | 100.00 |
| B to C | S 60° E | 80.00 |
| C to D | S 30° W | 100.00 |
| D to A′ | N 60° W | 79.96 |

1. Sketch the four courses in sequence and mark north.

2. Find signed latitude and departure for every course. Carry full precision until the final answer.

3. Find the closing northing and easting, linear misclosure and precision ratio. Explain the direction of the residual.

Use the separate blank worksheet to record your calculations.