

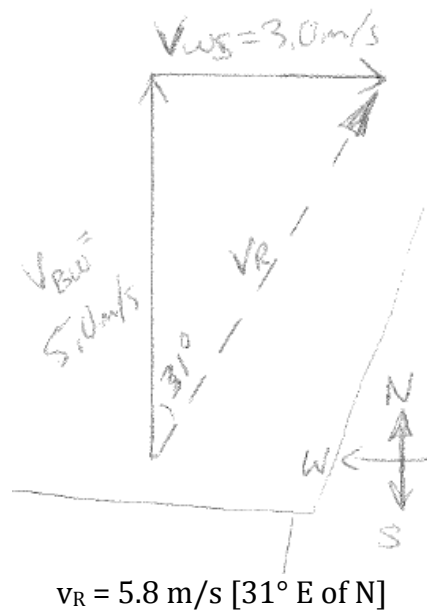
Rivers and Airplanes Worksheet Answer Key

Part 1 - Graphical Methods

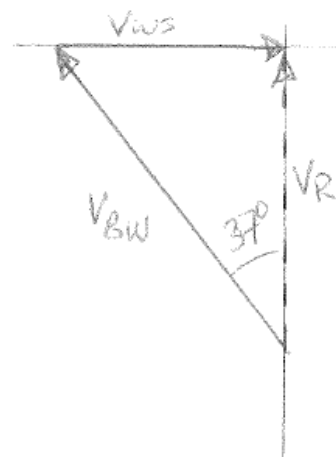
- | | | |
|--------------------|-----------------|-----------------|
| 1. (a) 3.0 m/s [E] | (b) 3.0 m/s [W] | (c) 0.0 m/s |
| 2. (a) due West | (b) 5.0 m/s [W] | (c) 2.0 m/s [W] |
| 3. (a) due East | (b) 5.0 m/s [W] | (c) 8.0 m/s [E] |

4. scale: 1.0 cm: 1.0 m/s

Scale diagram:



5. Scale diagram



- (a) heading = $[37^\circ \text{ W of N}]$
 (b) $v_R = 4.0 \text{ m/s } [N]$

6. Scale diagram



$$v_R = 6.3 \text{ m/s } [50^\circ \text{ N of E}]$$

7. [due North]