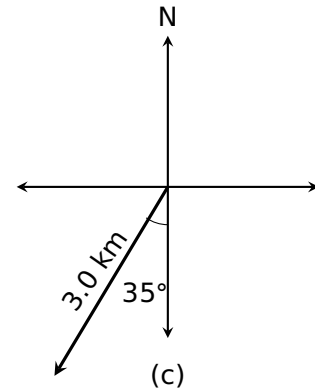
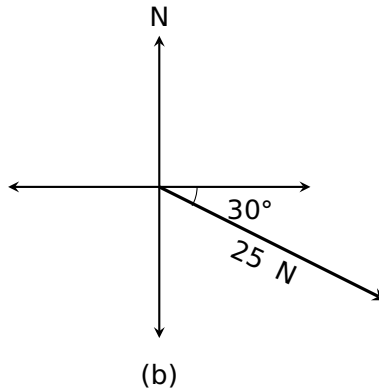
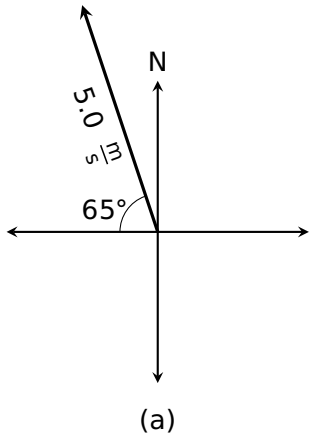


Vector Problem Set

Due Date: _____

- Of the following quantities, which are vectors? If it is, explain why. If not, explain why.
 - The cost of a theatre ticket.
 - The velocity of an airplane.
 - The force required to launch a rocket.
- For each of the following state two ways to write the vector.



- A plane flying with a velocity of $60 \frac{\text{m}}{\text{s}}$ East encounters a wind of $15 \frac{\text{m}}{\text{s}}$ to the South. What is the resultant velocity of the plane?
- While on vacation you drive South at 100 km/h for 2.0 h and then turn East and travel 50 km/h for 1.5 h.
 - How far do you travel?
 - What is your displacement from your starting point?
 - What is your average velocity?
- Your Uncle Harry's boat can travel $4.0 \frac{\text{m}}{\text{s}}$ in still water. One sunny afternoon, you and Uncle Harry decide to go fishing. While waiting for a bite, you begin thinking, "If this river is flowing at $2.5 \frac{\text{m}}{\text{s}}$ southward, and we are heading eastward, directly across the river, what are the direction and magnitude of our total velocity?" Answer your own question.