

1. Assume that $\|v\| = 2$, $\|w\| = 3$, and the angle between v and w is 120° . What is $\|2v + w\|$? (9pts.)

2. Consider a fluid flowing through a pipe. Imagine a slice or cross-section of the pipe. Then, the **flux** refers to: (1 pt.)
- (a) the velocity of the fluid.
 - (b) the volume of fluid that flows across the cross-section per unit time.
 - (c) the area of the cross-section times the amount of time the fluid was flowing.
 - (d) the friction between the fluid molecules and the perimeter of the cross-section.