

Math 2260 HW #15

Due 10:10 AM Friday, April 27

Reading: Hass §11.4–11.5

Problems: Do the assignment “HW15” on WebWork. In addition, write up solutions to the following problems and hand in your solutions in class on Friday.

1. Suppose $\vec{\mathbf{u}}$ and $\vec{\mathbf{v}}$ are vectors in space such that $|\vec{\mathbf{u}}| = |\vec{\mathbf{v}}|$. What can you say about the angle between the vectors $\vec{\mathbf{u}} + \vec{\mathbf{v}}$ and $\vec{\mathbf{u}} - \vec{\mathbf{v}}$?
2. Let $\vec{\mathbf{u}} = 2\vec{\mathbf{i}} - \vec{\mathbf{j}}$ and let $\vec{\mathbf{v}} = \vec{\mathbf{i}} + 2\vec{\mathbf{j}}$.
 - (a) What is the vector $\vec{\mathbf{u}} \times \vec{\mathbf{v}}$?
 - (b) Draw the vectors $\vec{\mathbf{u}}$, $\vec{\mathbf{v}}$, and $\vec{\mathbf{u}} \times \vec{\mathbf{v}}$.