

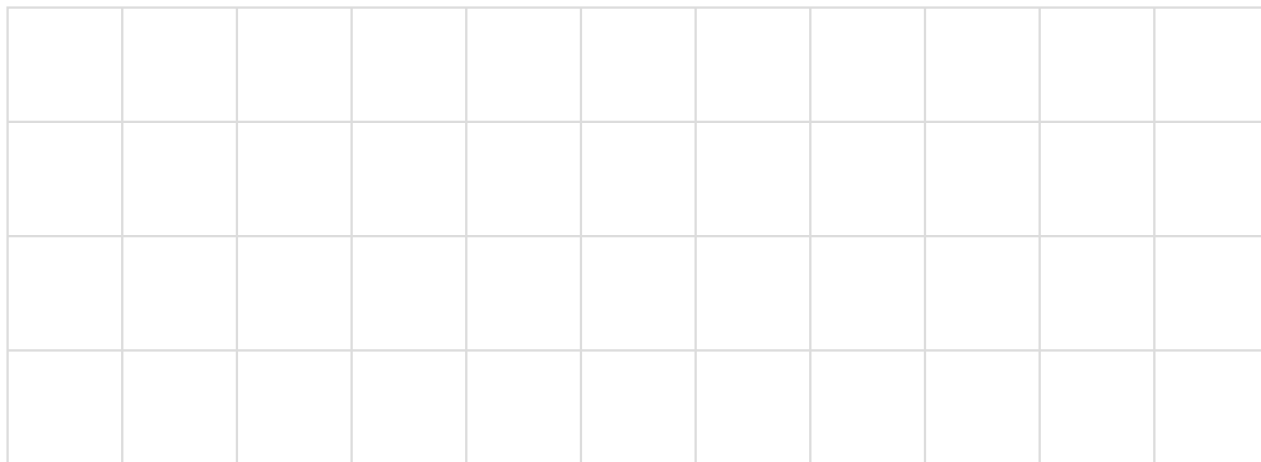
# Vectors

## 1 Problem I

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A vector  $\vec{\mathbf{F}}$  has a magnitude of 2 and makes an angle of  $30^\circ$  with the  $x$ -axis (with positive rotation counterclockwise).

1. Draw  $\vec{\mathbf{F}}$ .
2. Write  $\vec{\mathbf{F}}$  in the form  $F_x\hat{\mathbf{i}} + F_y\hat{\mathbf{j}}$ .



## 2 Problem II

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Given  $\vec{\mathbf{F}} = 3\hat{\mathbf{i}} - 4\hat{\mathbf{j}}$ ,

1. Draw  $\vec{\mathbf{F}}$ .
2. Compute  $F$ .
3. The angle  $\vec{\mathbf{F}}$  makes with respect to the  $x$ -axis (with positive rotation counterclockwise).

