Dividing Complex Numbers
L22
Springboard 8.2

Example

Simplify: $\frac{2}{i}$

	$\frac{2}{i}$
Multiply by Conjugate	$\frac{2(-i)}{i(-i)}$
Simplify	$\frac{-2i}{-(i^2)} =$ $\frac{-2i}{-(-1)} =$ $-\frac{2i}{1} =$ $-2i$

2)Simplify

	$\frac{3}{2-i}$
Multiply by Conjugate	$\frac{3(2+i)}{(2-i)(2+i)}$
Simplify	$\frac{3(2+i)}{(2-i)(2+i)} =$ $\frac{3(2+i)}{4-i^2} =$ $\frac{3(2+i)}{4-(-1)} =$ $\frac{3(2+i)}{4+1} =$ $\frac{3(2+i)}{5} =$ $\frac{6+3i}{5}$

We Try:

1) $\frac{6}{2+i} =$

	$\frac{6}{2+i} =$
Multiply by Conjugate	
Simplify	

2) $\frac{4+i}{-2-3i} =$

	$\frac{4+i}{-2-3i}$
Multiply by Conjugate	
Simplify	

You Try:

1) $\frac{-2}{2+i} =$

2) $\frac{4}{-5+2i} =$

3) $\frac{5i}{-3+2i} =$