

Unit 2:<br>Scavenger Hunt

Simplify:
$(5 i-3)(2 i+1)$

$$
-13-i
$$

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## What are the values of $x$ and $y$ ?

$$
3+y i=x-7 i
$$



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What are the values of $x$ and $y$ ?

$$
(x+6 i)=(3-i)+(4-2 y i)
$$

$$
\begin{aligned}
& x=7 \\
& y=-\frac{7}{2}
\end{aligned}
$$

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## Simplify:

$$
(1-i)^{3}
$$



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Simplify:


## $i$

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# Find the product of the complex number and its complex conjugate: 

$$
5-6 i
$$

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## Find the product of the complex number and its complex conjugate:




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## Write in standard $(a+b i)$ form



$$
\frac{1}{3}-\frac{2}{3} i
$$

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## Write in standard $(a+b i)$ form



$$
\frac{26}{29}+\frac{7}{29} i
$$

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## Write in standard ( $a+b i$ ) form

 $i$

$$
-\frac{1}{5}+\frac{2}{5} i
$$

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Solve:


$$
x=-\frac{1}{4} \pm \frac{i \sqrt{23}}{4}
$$

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## Solve:

$x^{2}+2 x+12=4 x-5$

# $x=1 \pm 4 i$ 

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Simplify:
(p. 226)



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Simplify:
(p. 226)


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> If $2-3 i$ is a solution to $a x^{2}+b x+c=0$, then what is the other solution?

