### Lesson 17 Practice Problems

1. Find the solution or solutions to each equation.
	1. $x^{2}+0.5x−14=0$
	2. $x^{2}+12x+36=0$
	3. $x^{2}−3x+8=0$
	4. $x^{2}+4=0$
2. Which describes the solutions to the equation $x^{2}+7=0$?
	1. One real solution
	2. Two real solutions
	3. One non-real solution
	4. Two non-real solutions
3. Explain how you know $\sqrt{3x+2}=-16$ has no solutions.
* (From Unit 3, Lesson 7.)
1. Determine the number of real solutions and non-real solutions to each equation. Use the graphs; don't do any calculations to find the solutions.
	1. $x^{2}−6x+7=0$
	2. $3x^{2}+2x+1=0$
	3. $-x^{2}−3x+2=0$
	4. $x^{2}−6x+7=-2$
	5. $-x^{2}−3x+2=6$
	6. $3x^{2}+2x+1=2$
* $y=x^{2}−6x+7$
* 
* $y=3x^{2}+2x+1$
* 
* $y=-x^{2}−3x+2$
* 
	1. Write $\left(5−5i\right)^{2}$ in the form $a+bi$, where $a$ and $b$ are real numbers.
	2. Write $\left(5−5i\right)^{4}$ in the form $a+bi$, where $a$ and $b$ are real numbers.
* (From Unit 3, Lesson 14.)
1. What number $n$ makes this equation true?
* $x^{2}+11x+\frac{121}{4}=\left(x+n\right)^{2}$
	1. $\frac{11}{4}$
	2. $\frac{11}{2}$
	3. 11
	4. $\frac{121}{4}$
* (From Unit 3, Lesson 16.)



© CC BY 2019 by Illustrative Mathematics®