### Lesson 6 Practice Problems

1. Select **all** solutions to the equation $x^{2}=7$.
	1. $\sqrt{7}$
	2. $-\sqrt{7}$
	3. 49
	4. -49
2. Find the solution(s) to each equation, if there are any.
	1. $x^{2}=9$
	2. $\sqrt{x}=3$
	3. $\sqrt{x}=-3$
	4. If $c$ is a positive number, how many solutions does $x^{2}=c$ have? Explain.
	5. If $c$ is a positive number, how many solutions does $\sqrt{x}=c$ have? Explain.
3. Suppose that a friend missed class and never learned what $37^{\frac{1}{3}}$ means.
	1. Use exponent rules your friend would already know to calculate $\left(37^{\frac{1}{3}}\right)^{3}$.
	2. Explain why this means that $37^{\frac{1}{3}}$ is the cube root of 37.
* (From Unit 3, Lesson 3.)
1. Evaluate $8^{\frac{5}{3}}$.
2. Write each expression without using exponents.
	1. $5^{\frac{2}{3}}$
	2. $4^{-\frac{3}{2}}$
* (From Unit 3, Lesson 5.)



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