# Practice Test for Radical Functions Unit

**Learning Objectives:**

1. Graph a quadratic equation using transformations.
2. Use the area of squares to model a quadratic function.
3. Graph a radical function using transformations.
4. Identify the domain and range of a radical function.
5. Solve radical equations.
6. Use a graph to find the solution to a radical equation.
7. Identify extraneous solutions in a radical function.

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| **Question #** | **Learning Objective** | **Know It** | **Feel Unsure** |  | **Right** | **Wrong** | **Simple Mistake** | **Need to Study** |
| 1 | A |  |  |  |  |  |  |  |
| 2 | B |  |  |  |  |  |  |  |
| 3 | C |  |  |  |  |  |  |  |
| 4 | D |  |  |  |  |  |  |  |
| 5 | E |  |  |  |  |  |  |  |
| 6 | F |  |  |  |  |  |  |  |
| 7 | G |  |  |  |  |  |  |  |

1. Graph each quadratic function:
	1. $f\left(x\right)=\left(x+2\right)^{2}-4$ b. $f\left(x\right)=3\left(x-4\right)^{2}$ c. $f\left(x\right)=-\frac{1}{2}\left(x+4\right)^{2}+2$
2. Draw an area model to represent: $f\left(x\right)=3\left(x+2\right)^{2}-2$
3. Graph: $f\left(x\right)=-2\sqrt{x+1}+3$
4. Identify the domain and range of the function in problem 3.
5. Solve:
	1. $2+\sqrt{x+5}=3$ b. $\sqrt{5x+14}=x$ c. $\sqrt{3x+5}=\sqrt{x+1}$
6. Graph this equations to solve: $\sqrt{x-2}+2=4$
7. Write a radical equation with an extraneous solution. Prove why it has an extraneous solution.