**Graphing Square Root & Cube Root Functions Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| 1. $f\left(x\right)= \sqrt{x-2}$

a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 2. $f\left(x\right)=\sqrt{x}-4$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3. $f\left(x\right)= -\sqrt{x}+2$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 4. $f\left(x\right)=\sqrt{x+1}-6$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 5. $f\left(x\right)= 3\sqrt{x}-4$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 6. $f\left(x\right)=-2\sqrt{x+3}$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 7. $f\left(x\right)= -2\sqrt{x-1}-5$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 8. $f\left(x\right)=\frac{1}{2}\sqrt{x+4}$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 9. $f\left(x\right)= \sqrt[3]{x-2}$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 10. $f\left(x\right)=\sqrt[3]{x}+4$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 11. $f\left(x\right)=\sqrt[3]{ x+1}-6$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 12. $f\left(x\right)= 3\sqrt[3]{x}$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 13. $f\left(x\right)=-2\sqrt[3]{x}+1$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 14. $f\left(x\right)= \frac{1}{2}\sqrt[3]{x-1}-4$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 15. $f\left(x\right)= -\sqrt[3]{x-2}+3$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 16. $f\left(x\right)=\sqrt[3]{x+2}-3$a = \_\_\_\_\_\_ h = \_\_\_\_\_\_ k = \_\_\_\_\_\_Reflection? \_\_\_\_\_\_Vertical stretch or shrink? \_\_\_\_\_\_\_\_\_\_\_\_Horizontal shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Vertical shift? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |