Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

Unit 7.3: Inverse Relations and functions

**Find the inverse of each relation shown below. Graph the given relation and it’s inverse.**

1. 2.

**Find the inverse. Decide if the inverse is a function and state how you know.**

3. $y=2x-3$ 4. $y=$ $\frac{x+9}{2}$

5. $f\left(x\right)=\frac{1}{2}x-2$ 6. $f\left(x\right)=\sqrt{2x-1}$

7. $y=4x^{2}-4$ 8. $f\left(x\right)=2x^{2}+5$

11. $f\left(x\right)=$ $\frac{7x-6}{x-1}$ 12. $y=$ $\frac{2x^{2}}{5}$ +1

**Graph each relation and it’s inverse.**

13. $y=5-2x$ 14. $f\left(x\right)=\sqrt[3]{x-1}$

 

9. $y=\left(x+2\right)^{2}$ 10. $f\left(x\right)=(2-2x)^{2}+1$ 

**For each function below: (a) find the inverse of each function, (b) find the domain and range of the function and it’s inverse, (c) determine if the inverse is a function.**

 15. $f\left(x\right)=\sqrt{x-4}$ 16. $f\left(x\right)=(x-2)^{2}$

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**Determine if** $g(x)$ **is an inverse function of** $f(x)$**.**

17. $f\left(x\right)=3x-1$ 18. $f\left(x\right)=x^{3}-1$

 $g\left(x\right)=$ $\frac{x-1}{3}$ $g\left(x\right)=\sqrt[3]{x+1}$