WORKSHEET 7.4 INVERSE FUNCTIONS

Inverse Relations

Find the inverse for each relation.

1. { (1, -3), (-2, 3), (5, 1), (6, 4) }

2. { (-5, 7), (-6, -8), (1, -2), (10, 3) }

Finding Inverses

Find an equation for the inverse for each of the following relations.

3. $y = 3x + 2$

4. $y = -5x - 7$

5. $y = 12x - 3$

6. $y = -8x + 16$

7. $y = \frac{2}{3}x - 5$

8. $y = -\frac{3}{4}x + 5$

9. $y = -\frac{5}{8}x + 10$

10. $y = \frac{1}{2}x + 8$

11. $y = x^2 + 5$

12. $y = x^2 - 4$

13. $y = (x + 3)^2$

14. $y = (x - 6)^2$

15. $y = \sqrt{x - 2},\ y \geq 0$

16. $y = \sqrt{x + 5},\ y \geq 0$

17. $y = \sqrt{x} + 8,\ y \geq 8$

18. $y = \sqrt{x} - 7,\ y \geq -7$

Verifying Inverses

Verify that *f* and *g* are inverse functions.

19. $f(x) = x + 6,\ g(x) = x - 6$

20. $f(x) = 5x + 2,\ g(x) = \frac{x - 2}{5}$

21. $f(x) = -3x - 9,\ g(x) = -\frac{1}{3}x - 3$

22. $f(x) = 2x - 7,\ g(x) = \frac{x + 7}{2}$

23. $f(x) = -4x + 8,\ g(x) = -\frac{1}{4}x + 2$

24. $f(x) = \frac{1}{2}x - 7,\ g(x) = 2x + 14$

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