In Exercises 1–10, solve the equation. Graph the solution(s), if possible.

1. \(|p - 3| = 10\)  
2. \(|-2k| = 6\)

3. \(|6f| = -2\)  
4. \(|\frac{q}{5}| = 3\)

5. \(|-a + 2| + 9 = 6\)  
6. \(3|4 - 3m| = 30\)

7. \(-4|5g - 12| = -12\)  
8. \(|x - 3| + 9 = 30\)

9. \(3|2d - 6| + 2 = 2\)  
10. \(7|2c - 6| + 4 = 32\)
11. A company manufactures penny number 2 nails that are 1 inch in length. The actual length is allowed to vary by up to \( \frac{1}{32} \) inch.

a. Write and solve an absolute value equation to find the minimum and maximum acceptable nail length.

b. A penny number 2 nail is 1.05 inches long. Is the nail acceptable? Explain.

In Exercises 12–14, write an absolute value equation that has the given solutions.

12. \( x = 3 \) and \( x = 9 \)  
13. \( x = -5 \) and \( x = 15 \)  
14. \( x = 4 \) and \( x = 11 \)

In Exercises 15–20, solve the equation. Check your solutions.

15. \( |9w - 4| = |2w + 10| \)  
16. \( 2|n + 7| = |4n + 8| \)

17. \( 3|3t + 1| = 2|6t + 3| \)  
18. \( |5r + 3| = 2r \)

19. \( |j - 5| = |j + 9| \)  
20. \( |2k + 4| = |2k + 3| \)