Homework: Transformations of Functions

In Problems 1-10, describe the transformation from the basic graph f(x) to g(x).

1. $g(x) = f(x) - 2$	2. $g(x) = f(x) + 3$
3. $g(x) = f(x - 1)$	4. $g(x) = f(x + 5)$
5. $g(x) = -f(x)$	6. $g(x) = f(-x)$
7. $g(x) = f(x - 3) + 5$	8. $g(x) = -f(x + 1)$
9. $g(x) = -f(x) + 4$	10. $g(x) = f(x + 4) + 1$

In Problems 11-36, describe the transformation from the basic graph

11. $g(x) = x + 5$	12. $g(x) = -x - 7$
13. $g(x) = (x + 3)^2$	14. $g(x) = -x^2 + 3$
15. $g(x) = -(x - 7)^2 + 2$	16. $g(x) = -x^2 - 2$
17. $g(x) = (x + 5)^3$	18. $g(x) = -(x - 2)^3$
19. $g(x) = -x^3 - 2$	20. $g(x) = -(-x + 4)^3 + 2$
21. $g(x) = \lvert x - 7 \rvert$	22. $g(x) = -\lvert x + 1 \rvert$
23. $g(x) = \lvert x + 2 \rvert - 4$	24. $g(x) = \sqrt{x + 4}$
25. $g(x) = \sqrt{x - 2} + 8$	26. $g(x) = -\sqrt{x} + 2$
27. $g(x) = -\sqrt{-x + 3}$	28. $g(x) = \sqrt[3]{x - 2}$
29. $g(x) = -\sqrt[3]{x + 1}$	30. $g(x) = -\sqrt[3]{-x} + 3$
31. $g(x) = \sin(x - 2)$ Note: This is trig but you do not need to know trig to work this problem	32. $g(x) = -\sin(x + 3)$
33. $g(x) = \sin(x + 5) - 2$	34. $g(x) = \tan(x - 1)$

35. $g(x) = \cos(x+3)$	36. $C(x) = x + 10000$