Identify each transformation from the parent function of $f(x)=B^x$.
Tell if the function is a decay or growth function.

1. $g(x)= 3^{x-2}$ _____

2. $g(x) = \frac{1}{2}^{x} + 3$ _____

3. $g(x) = -4^x - 6$ _____

4. $g(x)= -\frac{2}{3}^{x-5} + 4$ _____

5. $g(x)= 2^{x-7} + 5$ _____

6. $g(x)= 3(2^{x+1}) + 2$ _____

Write the function for each graph described below.

7. the graph of $f(x) = 2^x$, reflected across the x axis. _____

8. The graph of $f(x)=\frac{1}{3}^{x}$, translated up 5 units. _____

9. The graph of $f(x) = 3^x$, left 2 units, and down 3. _____

10. The graph of $f(x) = \frac{1}{2}^{x}$, translated down 2 units _____

11. The graph of $f(x) = 4^x$, stretched horizontally by a factor of 3 _____

12. The graph of $f(x) = 2^x$, up 4 units, right 3 _____

Make a table and graph the following. State the domain, range, and asymptote for each function

13. $f(x) = 3^x + 1$
d:
r:
a:

14. $f(x) = \left(\frac{1}{2}\right)^{x-1}$
d:
r:
a:

15. $f(x) = -2^x - 1$
d:
r:
a:

16. $f(x) = -\left(\frac{1}{3}\right)^x + 2$
d:
r:
a:

17. $f(x) = -3^{x+2}$
d:
r:
a:

18. $f(x) = 2(2)^x$
d:
r:
a:

19. $f(x) = \frac{1}{2}(2^x)$
d:
r:
a:

20. $f(x) = \left(\frac{2}{3}\right)^x - 1$
d:
r:
a:

21. $f(x) = 3(2^{x-1}) - 4$
d:
r:
a:

Graph the following system of inequalities

22. $2x+3y > 3$
$x>3$

23. $y \leq \frac{1}{2}x + 1$
$y<2$

24. Using the model $A = P\left(1+\frac{r}{n}\right)^{nt}$, where P is the beginning amount, n is the number of times compounded in a year, r is the rate as a decimal, and t is the number of years, find how much money you would have if you invested $5000 in a money market account that earns 5% interest, compounded quarterly.

25. Using the same model as in number 24, find the amount of money you would have if you invested the same amount, compounded yearly, into an account that earns 7% interest.