Describe the Transformation from the parent function: (parent function in parentheses)

1) $y = |x - 4|$ $(y = |x|)$

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

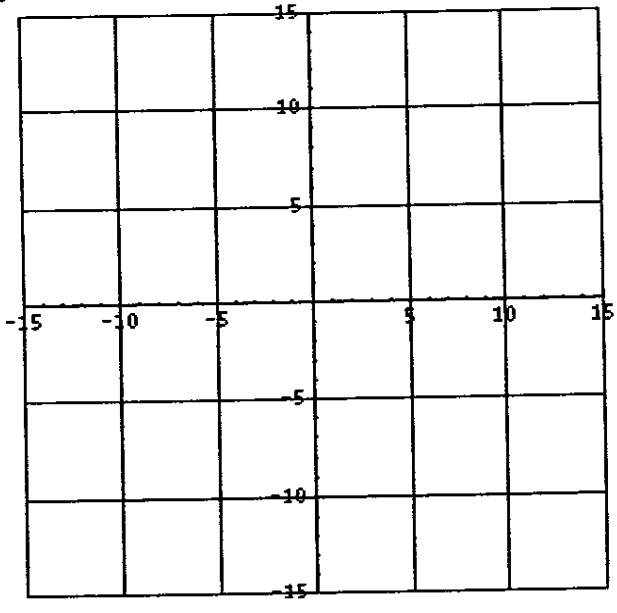
3) $y = |x - 3| - 6$ $(y = |x|)$

4) $y = (x + 5)^2$ $(y = x^2)$

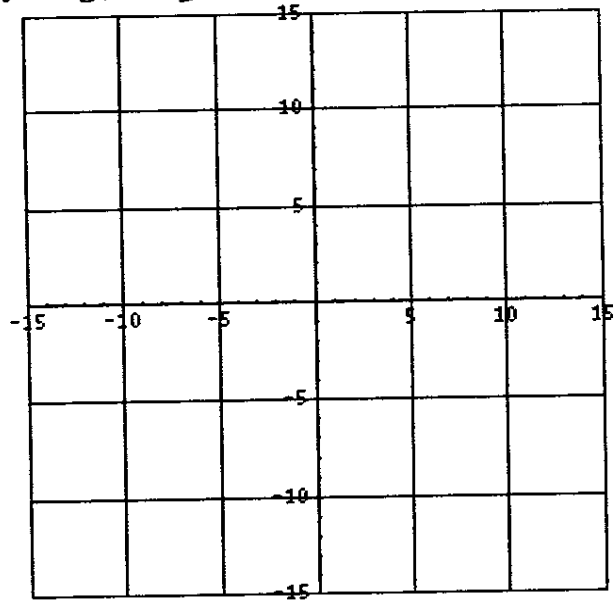
5) $y = 2(7^{x+9}) + 7$ $(y = 7^x)$

Graph using Transformations:

6) $y = 3|x + 1| - 1$

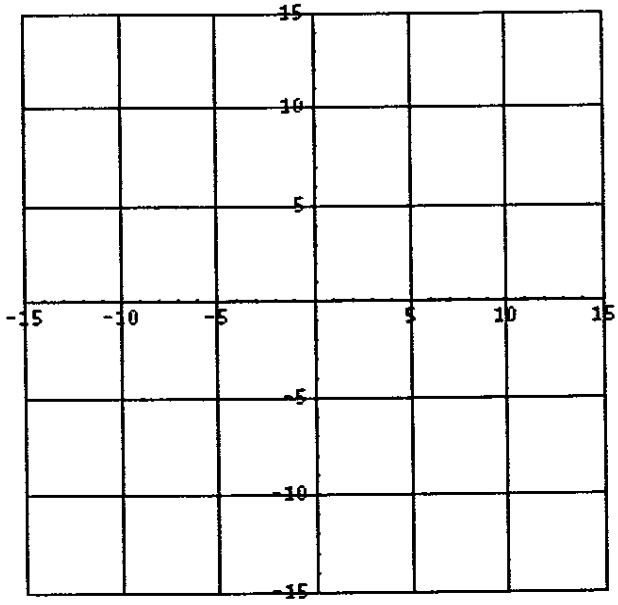


7) $y = -3x^2 - 3$



8) $y = -|x + 1| - 3$

(graph on back)



Write an equation of the function:

9) A parabola that is transformed: stretched by a factor of 2, left 1
(vertical)

10) An absolute value equation that is transformed: stretched by a factor of 2, down 3
(horizontal)

11) A square root equation that is transformed: flipped, stretched by a factor of 2, left 3, up 2
(x-axis) (vertical)