Functions and their inverses extra practice with answers

1. $f(x) = 3(x-3)^2 - 4$. For which values of x will f(x) be invertible?

2. $g(x) = -(x+10)^2 - 4$. For which values of x will g(x) be invertible?

3. Is $h(x) = |x+4|$ invertible? Defend your answer. If the answer was no, what values for x will make h(x) invertible?

4. $j(x) = 9 + \sqrt{x}$. For what values of x will j(x) be invertible? What is the inverse of j(x)?

5. $d(m) = 8(3)^m$. What is the domain and range of d(m)? Find the inverse of d(m). Is d(m) invertible?

1. $x \geq 3$
2. $x \geq -10$
3. No, the inverse is not a function. Used horizontal line test. Restrict domain of h(x) to $x \geq -4$
4. All numbers greater than 0, including zero. $j^{-1}(x) = (x-9)^2$
5. D: All Real Numbers R: All real numbers greater than 0. Inverse: $d^{-1}(m) = log_3 \frac{m}{8}$