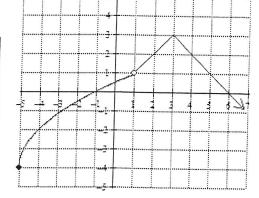Pictured to the right is the graph of a piece-wise defined function, $g(x)$, that consists of a piece of a square root function and a piece of an absolute value function. Also, the function $p(x)$ is defined by the equation $p(x) = -\sqrt{x+4} + 1$.

a. State the domain and range of the function $g(x)$.

Domain:_____

Range:_____

b. State how the graph of the function $p(x)$ would be different from the graph of $y = \sqrt{x}$. Then, graph $p(x)$ on the same grid as $g(x)$ using a minimum of 4 points plotted on the graph.

c. State what would be graphically true if $p(x) = g(x)$. Then, state for how many x – values $p(x) = g(x)$.

d. Find the value of $3[p(12) - 2g(4)g(-5)]$. Either show your work or explain how you determined the values of $p(12)$, $g(4)$ and $g(-5)$.