Name: _____   Period: _____
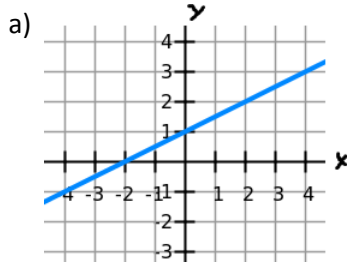
Checkpoint 5D   *Integrated Math 2*

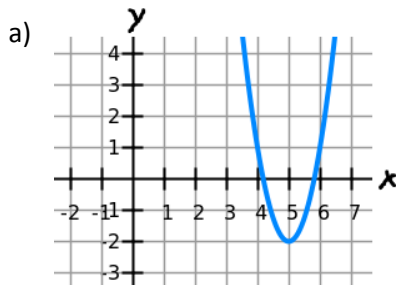*Answer the questions thoroughly including any necessary math or explanations.*

1) Describe the transformation from the parent function $f(x) = x$.

a)

b) $g(x) = 4x - 2$

c) $h(x) = -2(x - 4)$

2) Describe the transformation from the parent function $f(x) = x^2$. What is the vertex of the transformation?

a)

b) $g(x) = (x + 3)^2 - 4$

c) $h(x) = (x - 2)^2 + 9$

3) Write the equation that represents the transformation from the parent function $f(x) = x^2$. What is the vertex of the transformation?

a) Shift 2 units right, shift 5 units down   b) Shift 3 units left, shift 4 units up   c) Shift 6 units down, shift 7 units left

5) Describe the transformation from the parent function $f(x) = 2^x$.

    a) $m(x) = 2^{(x-5)} + 3$ b) $n(x) = 2^{(x+2)} - 7$ c) $t(x) = 2^{(x-9)} - 4$

6) Describe the transformation from Function 1 to Function 2.

    a) $f_1(x) = (x+4)^2 - 5$; $f_2(x) = \dfrac{1}{2}(x-1)^2 - 3$ b) $f_1(x) = 2^{(x-1)} + 1$; $f_2(x) = 2^{(x-4)} - 3$