

**BLM 1-4 Section 1.3 Extra Practice**1. **a)** B **b)** C **c)** D **d)** A2. **a)**  $y = 3(-(x+3))^2 - 2$  .....

**b)**  $y = -\left(\frac{1}{2}x\right)^2 + 7$  **c)**  $y = (4(x-5))^2 - 1$

**d)**  $y = -\frac{1}{3}(2x)^2$

3. **a)**  $y = 2f(-(x+6))$  **b)**  $y = -f(2(x+5))$

**c)**  $y = -\frac{1}{2}f(-3(x-4))$  **d)**  $y = 4f(-(x-9))$

4. **a)** vertically stretched by a factor of 2, horizontally stretched by a factor of  $\frac{1}{5}$ , translated 3 units right**b)** vertically stretched by a factor of  $\frac{1}{4}$ , reflected in the x-axis, reflected in the y-axis, translated 7 units right**c)** horizontally stretched by a factor of  $\frac{1}{3}$ , translated 4 units left

5.  $y = -f\left(\frac{1}{5}(x-3)\right)$

6. **a)** (-12, 4) **b)** (-3, 24)

**c)** (-23, -32) **d)** (-36, -12)

7. **a)**  $(a+7, 0)$ ;  $(0, 3b+2)$

**b)**  $(-4a, 0)$ ;  $(0, b-7)$

**c)**  $(a-10, 0)$ ;  $(0, 4b-3)$

**d)**  $\left(\frac{a}{2}, 0\right)$ ;  $(0, -b-6)$