[illegible] Transformations

Name: Key

Given $f(x) = 4^x$, find $g(x)$ when the function is....

1) Translated 2 units down
$g(x) = 4^x - 2$

2) Translated 3 units to the right
$g(x) = 4^{(x-3)}$

3) reflected over the x-axis
$g(x) = -(4^x)$
$g(x) = -4^x$

4) reflected over the y-axis
$g(x) = 4^{(-x)}$

5) vertically stretched by 2
$g(x) = 2(4^x)$

6) vertically compressed by $\frac{2}{3}$
$g(x) = \frac{2}{3}(4^x)$

7) horizontally stretched by 3
$g(x) = 4^{(\frac{1}{3}x)}$

8) horizontally compressed by [illegible]
$g(x) = 4^{([illegible]x)}$

Given $f(x) = \log_3 x$, find $g(x)$ when the function is....

1) Translated [illegible] down and [illegible] right
$g(x) = \log_3(x-7) - 3$

2) Translated [illegible] to the left and [illegible] up
$g(x) = \log_3(x+5) + 5$

3) reflected over the x-axis
$g(x) = -\log_3 x$

4) reflected over the y-axis
$g(x) = \log_3(-x)$

5) vertically stretched by [illegible]
$g(x) = 4\log_3 x$

6) vertically compressed by $\frac{2}{3}$
$g(x) = \frac{2}{3}\log_3 x$

7) horizontally stretched by [illegible]
$g(x) = \log_3(2x)$

8) horizontally compressed by [illegible]
$g(x) = \log_3(3x)$

9) horizontally compressed by [illegible]
$g(x) = \log_3([illegible]x)$

10) translated [illegible] right and [illegible] down
$g(x) = \log_3(x-8) - 2$