Name: **Date:**

Scaffolded Practice: Logarithmic Functions as Inverses

For problems 1–6, write the inverse function for each exponential function.

1. $f(x) = 9 \bullet 6^{2x}$

2. $g(x) = 0.9 \bullet 8^{-0.7x}$

3. $h(x) = 2^{x-1} - 1$

4. $f(x) = 4^{\left(\frac{x}{x-1}\right)}$

5. $g(x) = 8 - 2^{x+1}$

6. $h(x) = x - 4^{x}$

continued

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For problems 7–10, state the domain and range of the logarithmic function.

7. $a(x) = 2 \bullet \log_3 (x - 1)$

8. $b(x) = 2 + \log_2 x$

9. $c(x) = \log_6 x - \log_3 6$

10. $d(x) = 0.4[\log_5 x - \log_4 (x + 1)]$