

1.

Solve for x : $32^{x-1} = 8^{3x-1}$

A. -2

B. $-\frac{1}{2}$

C. $\frac{1}{2}$

D. 2

2.

Solve: $27^{x+2} = \left(\frac{1}{3}\right)^{3-6x}$

A. $-\frac{1}{3}$

B. $\frac{1}{7}$

C. $\frac{5}{3}$

D. 3

3.

Solve: $\log(3x-1) + \log 4 = \log(4x+5)$

A. -2

B. $-\frac{21}{13}$

C. $\frac{3}{4}$

D. $\frac{9}{8}$

4.

Solve: $\log_2(3-x) + \log_2 x = 1$

A. 1

B. 2

C. $1, 2$

D. no solution

5. Solve for x (to the nearest thousandths)

(a) $10^x = 6$

(b) $\log_5 x = 3$

(c) $\log_x 85 = 7$

(d) $\log_3 x + \log_3(x-8) = 2$

(e) $4^{x-2} = 3^{x+1}$

(f) $2\log x - \log_2 5x = 4$

(g) $5(4)^x = 16^{x-1}$