

Solve each of the following for x:

$$A. 5^{x+1} - 5^{4x} + 5^{2x-1} - 5^{5x-2} = 0$$

$$B. 2^{2x+2} - 2^{x+3} - 2^{3x+1} + 16 = 0$$

$$C. 7^{2x+1} + 7^{2x} + 7^{3x+1} + 7^{2x+2} = 0$$

$$D. 11^{2x} + 11^{2x-2} - 11^{2x+3} - 11^{2x+2} = 0$$

In interval notation, give the set of x-values which satisfy each inequality:

$$E. 2 \leq |x - 1| \leq 5$$

$$F. x^4 + \frac{9}{2}x^3 + 6x^2 + 2x > 0$$

$$G. \left| \frac{1}{\sqrt{x}} - \frac{1}{3} \right| < 0.5$$

$$H. \left| \sqrt{x^2 + x} - \cdot x - \frac{1}{2} \right| < 0.2$$