

Lesson 4.4: Solving exponential equation

a) $4^{5x-1} = 8^{2x+3}$

b) $\frac{9^{x-3}}{3^{4x+1}} = 81^{x+2}$

c) $5^{3x} = 30$

d) $2^{2x} - 2^x - 3 = 0$

e) $3 \cdot 3^{2x} - 28 \cdot 3^x + 9 = 0$

f) $5^{3x} = 30$

g) Determine all real values of x for which

$$3^{x+2} + 2^{x+2} + 2^x = 2^{x+5} + 3^x$$

h) Determine all real values of x for which $3^{(x-1)} 9^{\frac{3}{2x^2}} = 27$.