Exponential Equations

Algorithm
1. Make the bases the same
2. Simplify the exponents
3. Set the exponents equal

Solve the following exponential equations

1. $3^2 = 3^x$

2. $7^x = 7^{2x+3}$

3. $2^5 = 2^{2x-1}$

4. $4^{x-1} = 8^x$

5. $9^{3x} = 81^{x+4}$

6. $8^{x-1} = 16^{3x}$

7. $(1/2)^{x-1} = 8^{x-3}$

8. $8^4 = (1/2)^{-6x}$

9. $9^{x-1} = (1/3)^{4x-1}$

10. $2^x + 2^x + 2^x + 2^x = 32$