

exponential functions.

1. $32^{2x-3} = 2$

We know that $32 = 2^5$ then $32^{2x-3} = 2^{5*(2x-3)}$ and

$$2^{5*(2x-3)} = 2^1$$

We can use logarithm to both sides

$$5 * (2x - 3) = 1$$

$$10x = 16$$

$$x = 1.6$$

2. $9^{2x+1} = 81$

We know that $81 = 9^2$ then

$$9^{2x+1} = 9^2$$

We can use logarithm to both sides

$$2x + 1 = 2$$

$$x = 0.5$$

3. $1/4 = 2^{3x}$

We know that $1/4 = 2^{-2}$ then

$$2^{-2} = 2^{3x}$$

$$-2 = 3x$$

$$x = -\frac{2}{3}$$