

Power Table

0 1 2 3 4 5 6 7

So what must the value of "x" be in order for this to be true?

$$6^x < 6^3$$

What about this?

$$6^{x+2} \geq 6^5$$

What about this?

$$6^{10} > 6^{2x}$$

EXPONENTIAL INEQUALITIES: * Remember, when solving inequalities you need to flip the inequality sign when dividing or multiplying by a negative number. You also need to check your solutions to make sure they make sense.

$$3^{12} > 9^{2x}$$

$$27^{x-2} \leq 81^{x+7}$$

$$16^{-1} < 64^{-x-2}$$

Put it all together:

$$6^{2a+4} \geq 6^{2a+9}$$

$$27^{1-3b} < 9$$

$$4^{3c} \geq 1$$

Put it all together:

$$4^{3a} \geq 2^3$$

$$16^{-2b} \leq 64^b$$

$$27^{c-2} < 3^5$$