J. Let a, b, c be positive numbers. There are *finitely* many *positive whole* numbers x, y which satisfy the inequality

$$a^x > c\, b^y$$

if

(a) $a > 1$ or $b < 1$.
(b) $a < 1$ or $b < 1$.
(c) $a < 1$ and $b < 1$.
(d) $a < 1$ and $b > 1$.