MathFLIX CHALLENGE

Comparing Exponential Values

Which is larger?

Standard	Multiplication	x^y	< or >	y^x	Multiplication	Standard
1	1 × 1	1^2	<	2^1	2	2
8	2 × 2 × 2	2^3		3^2	3 × 3	9
		3^4		4^3		
		4^5		5^4		
		5^6		6^5		

Standard	Multiplication	x^y	< or >	y^x	Multiplication	Standard
1		1^{10}	<	10^1	10	10
1024		2^{10}		10^2		
		3^{10}		10^3		
		4^{10}		10^4		
		5^{10}		10^5		
60,466,176		6^{10}		10^6		

Multiplication		Exponential	Standard
2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 2 × 2	=	2^{12}	4096
(2 × 2) × (2 × 2) × (2 × 2) × (2 × 2) × (2 × 2) × (2 × 2)	=	4^6	
(2 × 2 × 2) × (2 × 2 × 2) × (2 × 2 × 2) × (2 × 2 × 2)	=	8^4	4096
(2 × 2 × 2 × 2 × 2) × (2 × 2 × 2 × 2 × 2) × (2 × 2 × 2 × 2 × 2)	=		
(2 × 2 × 2 × 2 × 2 × 2 × 2) × (2 × 2 × 2 × 2 × 2 × 2 × 2)	=		
3 × 3 × 3 × 3 × 3 × 3 × 3 × 3 × 3 × 3 × 3 × 3	=		531,441
(3 × 3) × (3 × 3) × (3 × 3) × (3 × 3) × (3 × 3) × (3 × 3)	=		