Warm Up
Grade 8

Oct. 26, 2017

1) Complete the chart

Power	Base	Exponent	Expanded Form	Exponential Form	Standard form
4^7					
	2	6			
	11	3			
		4			81
	7				16807
			12x12x12		

Power

exponent (how many times to be repeated)

2^4

Base (# that is being repeated)

$2 \times 2 \times 2 \times 2 = 16$

Buttons

2 x^y 4 = 16

y^x

x^0

$\sqrt{\ }$

Solutions Warm Up

1) Complete the chart

Calculate answer

Power	Base	Exponent	Expanded Form	Exponential Form	Standard form
4^7	4	7	4x4x4x4x4x4x4	4^7	16384
2^6	2	6	2x2x2x2x2x2	2^6	64
11^3	11	3	11x11x11	11^3	1331
3^4	3	4	3x3x3x3	3^4	81
7^5	7	5	7x7x7x7x7	7^5	16807
12^3	12	3	12x12x12	12^3	1728

Solution to Homework

	Power	Base	Exponent	Exponential Form	Expanded Form	Standard Form
a)	7^3	7	3	7^3	7x7x7	343
b)	9^4	9	4	9^4	9x9x9x9	6561
c)	6^2	6	2	6^2	6x6	36
d)	4^5	4	5	4^5	4x4x4x4x4	1024
e)	3^5	3	5		3x3x3x3x3	243
f)	10^4	10	4	10^4	10x10x10x10	10000
g)	5^4	5	4	5^4	5x5x5x5	625
h)	4^5	4	5	4^5	4x4x4x4x4	1024
i)	8^3	8	3	8^3	8x8x8	512
j)	3^9	3	9	3^9	3x3x3x3x3x3x3x3x3	19683
k)	8^2	8	2	8^2	8x8	64
l)	5^6	5	6	5^6	5x5x5x5x5x5	15625
m)	3^3	3	3	3^3	3x3x3	27
n)	11^2	11	2	11^2	11x11	121
o)	6^4	6		6^4	6x6x6x6	1296
p)	2^5	2	5	2^5	2x2x2x2x2	32

Ex. 1)

Find the missing exponent. (Show Work)

$4^{\square} = 1024$

$4^1 = 4$

$4^2 = 16$

$4^3 = 64$

$4^4 = 256$

$4^5 = 1024$

$7^{\square} = 343$

$7^1 = 7$

$7^2 = 49$

$7^3 = 343$

Ex. 2)

Find the missing base.

$\underline{6}^{2} = 36$

$1^2 = 1$

$2^2 = 4$

$3^2 = 9$

$4^2 = 16$

$5^2 = 25$

$6^2 = 36$

$\underline{12}^{3} = 1728$

$1^3 = 1$

$2^3 = 8$

$3^3 = 27$

$4^3 = 64$

$5^3 = 125$

$6^3 = 216$

$7^3 = 343$

$8^3 = 512$

$9^3 = 729$

$10^3 = 1000$

$11^3 = 1331$

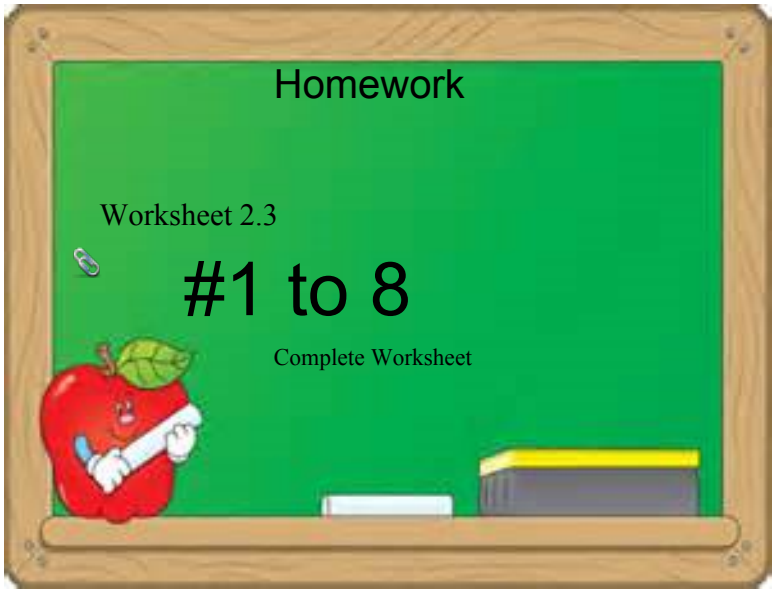
$12^3 = 1728$

Ex. 3)

Place a $<$, $>$ or $=$ in the box. (Show your calculation)

$3^5 \boxed{>} 6^3$

243 216



Quiz Tomorrow

Attachments

WS 2.3 Powers.doc