Warm Up
Grade 8
Quiz Tomorrow

1) Complete the chart

Power	Base	Exponent	Expanded Form	Exponential Form	Standard form
a 4^7	4	7	$4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4$	4^7	16 384
b 2^6	2	6	$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2$	2^6	64
c 11^3	11	3	$11 \cdot 11 \cdot 11$	11^3	1331
d 3^4	3	4	$3 \cdot 3 \cdot 3 \cdot 3$	3^4	81
e 5	7	5	$7 \cdot$		16807
f 12^3	12	3	12x12x12	12^3	1728

d) $\square^4 = 81$

$1^4 = 1$
$2^4 = 16$
$3^4 = 81$

e) $7^\square = 16807$

7^1
7^2
7^3

Solutions *Warm Up*

1) Complete the chart

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)

$4^{\boxed{5}} = 1024$

$4^1 = 4$
$4^2 = 16$
$4^3 = 64$
$4^4 = 256$
$4^5 = 1024$

$7^{\boxed{3}} = 343$

$7^1 = 7$
$7^2 = 49$
$7^3 = 343$

Ex. 2)
Find the missing base.

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

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

Ex. 3)

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

Big
$3^5 \quad \boxed{>} \quad 6^3$
243   216

Quiz Wednesday

Homework

Worksheet 2.3

#1 to 8

Complete Worksheet
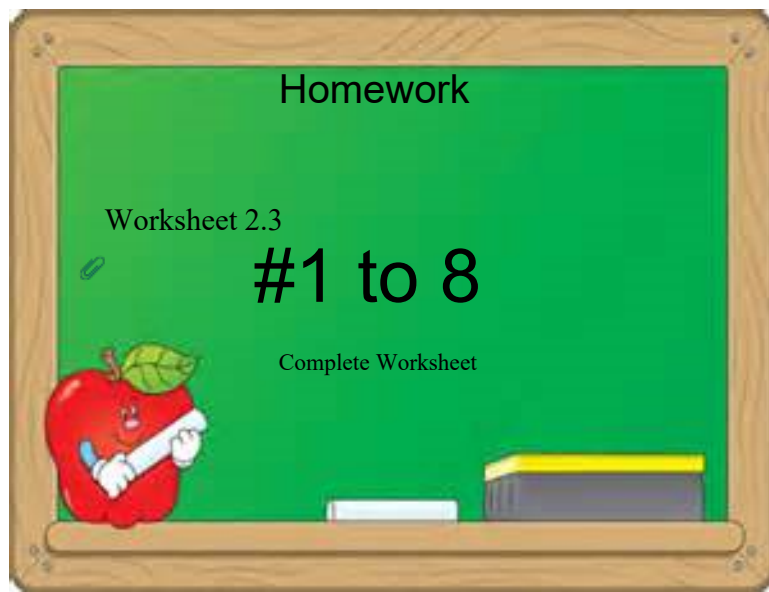
Quiz Tomorrow

What do we notice?

3^1 = 10^0 =

10^1 = 2^0 =

12^1 = 81^0 =

17^1 = 21^0 =

27^1 = 13^0 =

99^1 = 5^0 =

Exponents

Whenever you have an exponent of 2, it is said to be squared. 3^2 might be read as 3 squared.

Whenever you have an exponent of 3, it is said to be cubed. 5^3 might be read as 5 cubed.

If the base is raised to the exponent 1, then the answer will always be the base itself.
    examples: $15^1 = 15$ $24^1 = 24$ $6\ 893^1 = 6\ 893$

If the base is raised to the exponent 0, then the answer will always be 1.
    examples: $26^0 = 1$ $147^0 = 1$ $945^0 = 1$

Discuss using a calculator

x^y or y^x or y ⌃

Attachments

WS 2.3 Powers.doc