Curriculum Outcome

(N1) Demonstrate an understanding of powers with integral bases (excluding base 0) and whole number exponents by: representing repeated multiplication using powers; using patterns to show that a power with an exponent of zero is equal to one; solving problems involving powers.

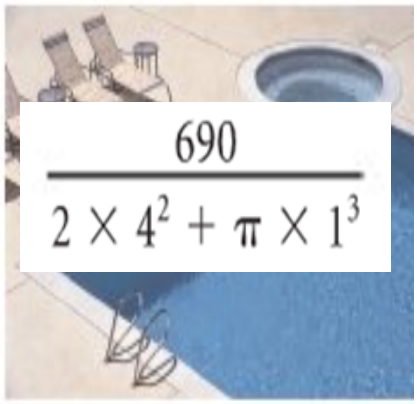
(N2) Demonstrate an understanding of operations on powers with integral bases (excluding base 0) and whole number exponents.

Student Friendly:

Warm Up

Lyn has a square swimming pool, 2 m deep with side length 4 m. The swimming pool is joined to a circular hot tub, 1 m deep with diameter 2 m. Lyn adds 690 g of chlorine to the pool and hot tub each week. This expression represents how much chlorine is present per 1 m^3 of water:

$$\frac{690}{2 \times 4^2 + \pi \times 1^3}$$



The suggested concentration of chlorine is 20 g/m^3 of water.
What is the concentration of chlorine in Lyn's pool and hot tub?
Is it close to the suggested concentration?

$$\frac{690}{2 \times 4^2 + \pi \times 1^3}$$

Warm Up

Name: _____

1) Complete the following chart

	Power	Base	Exponent	Repeated Multiplication	Standard (Evaluate)
a)	$(-3)^5$				
b)				(-4) (-4) (-4)	
c)	-2^6				
d)		-7	3		
e)	$-(-5)^4$				

2) Express in power form and THEN evaluate

$$-(-2)(-2)(-2)(-3)(-3)(-3)(-3)$$

3) Write the following as a base of 5

15 625

answer:

4) Evaluate the following

a) $(-18)^0$ = ___

b) -18^0 = ___

c) $-(-18)^0$ = ___

5) Write the following in power of ten form

57 203= _____

6) Write the following in standard form

$(2 \times 10^6) + (3 \times 10^5) + (2 \times 10^3) + (1 \times 10^0)$ = _____

Warm Up

Name: _____

1) Complete the following chart

	Power	Base	Exponent	Repeated Multiplication	Standard (Evaluate)
a)	$(-3)^5$	-3	5	(-3)(-3)(-3)(-3)(-3)	-243
b)	$(-4)^3$	-4	3	(-4) (-4) (-4)	-64
c)	-2^6	2	6	- (2)(2)(2)(2)(2(2))	-64
d)	$(-7)^3$	-7	3	(-7)(-7)(-7)	-343
e)	$-(-5)^4$	-5	4	- (-5)(-5)(-5)(-5)	-625

5

2) Express in power form and THEN evaluate

$$-(-2)(-2)(-2)(-3)(-3)(-3)(-3)$$

$= -(-2)^3(-3)^4$

$= -(-8)(81)$

$= 648$

2

3) Write the following as a base of 5

15 625

5 3125

5 625

5 125

5 25

5 5

answer: 5^6

2

4) Evaluate the following

a) $(-18)^0$ = 1

b) -18^0 = -1

c) $-(-18)^0$ = -1

3

5) Write the following in power of ten form

57 203= $(5 \times 10^4) + (7 \times 10^3) + (2 \times 10^2) + (3 \times 10^0)$

1

6) Write the following in standard form

$(2 \times 10^6) + (3 \times 10^5) + (2 \times 10^3) + (1 \times 10^0)$ = 2 302 001

1

Class/Homework

Page 66-68

SHOW WORK

3 (a, c, e)
4 (a, c, e,)
5 (e, g)
8 (a, c, e)

3 (f,h,j)
4 (d,f,g,h)
5 (b,d,f,h)
8 (b,d,f)
10(all)
15
16(all)
19