Warm Up
Grade 9

1) Write the following as a repeated multiple and evaluate

a) $(-3)^5$ $(-3)(-3)(-3)(-3)(-3)$ -243

b) $-(-2)^0$ -1

c) $-(-2)^6$ -64

d) $-(3)^0(-4)^3$ $(-1)(-64)$ 64

2) Write as a power then evaluate

a) $-(2)(2)(2)(-3)(-3)(3)(3)$ $-2^3 \cdot (-3)^2 \cdot (3)^2$ $-8 \cdot 9 \cdot 9 = -648$

b) $(-5)(-5)(4)(4)(4)(4)(4)$ $(-5)^2 \cdot (4)^5$ $25 \cdot 1024$

3) Write the following as a powers of 10:

a) 68 706 324 $(6 \times 10^7) + (8 \times 10^6) + (7 \times 10^5) + (6 \times 10^3)$

25600 $(3 \times 10^2) + (2 \times 10^1) + (4 \times 10^0)$

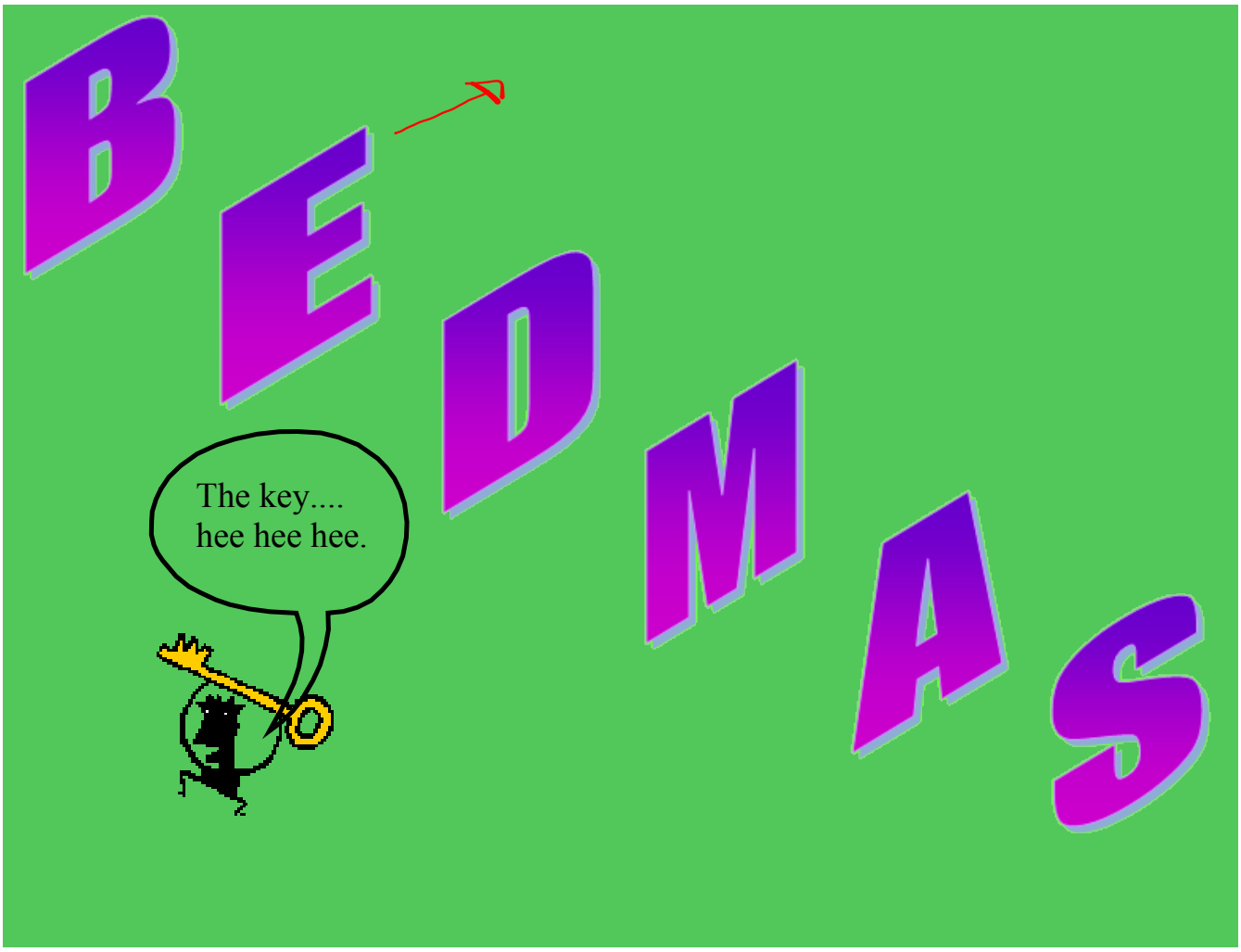
4) Write the following in standard form:

a) $(5 \times 10^4) + (9 \times 10^2) + (7 \times 10^1) + (6 \times 10^0)$

$50000 + 900 + 70 + 6$

50976

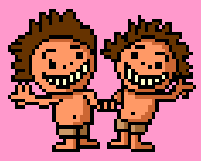

Order
of
Operations

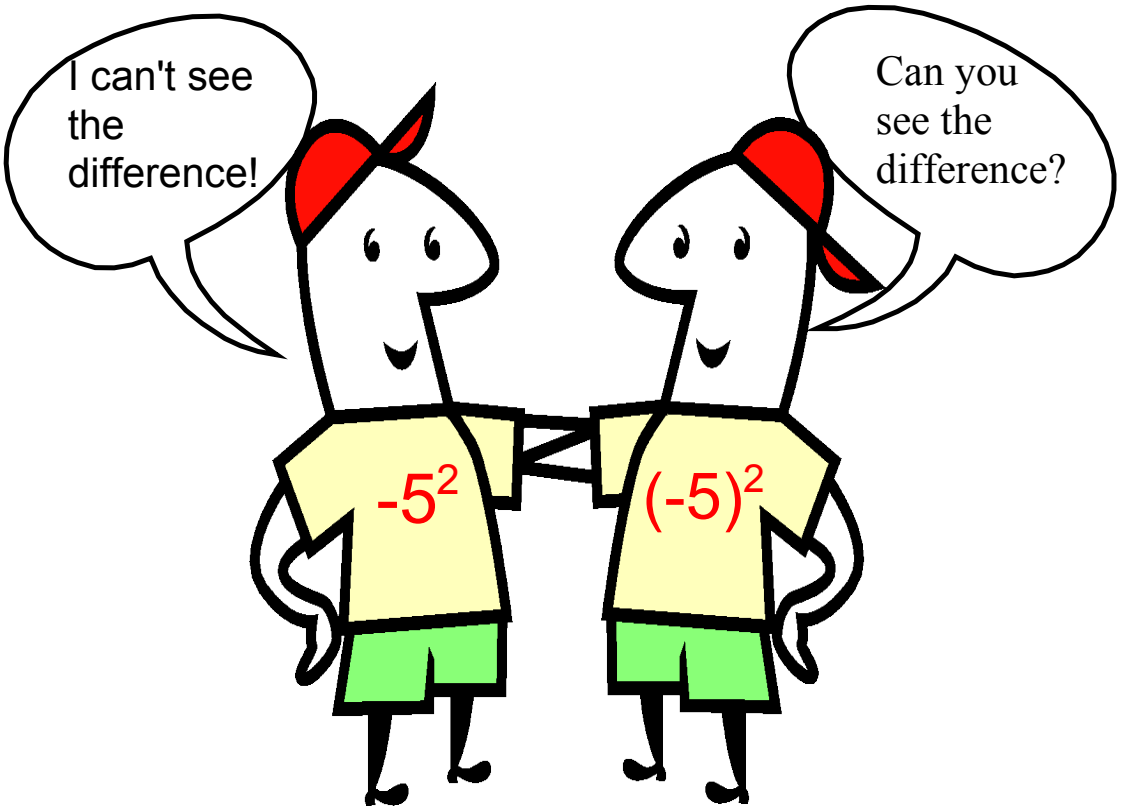

BEDMAS
The key....
hee hee hee.

$$\frac{-15+3-13}{3\times 2-7^{0}}$$

$$\frac{-25}{5} = -5$$

Order of Operations with Exponents





$5 - 3^2$

$5 - 9$

$= -4$

$5 + (-3)^2$

$5 + 9$

$= 14$

THERE IS A **huge** DIFFERENCE!

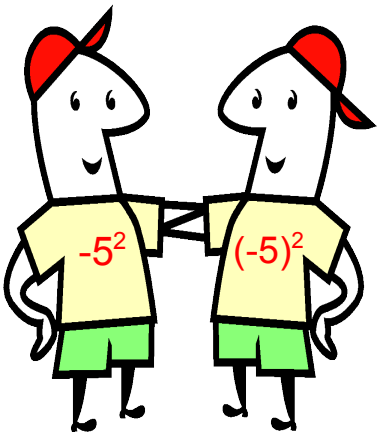
-5^2

$(-1)5^2$

$(-1)25$

-25

There is a negative one being multiplied by the 5^2.



$(-5)^2$

$(-5)(-5)$

25

(-5^2)

1. -4^2

2. $(-3)^2$

3. $(-2)^3$

BEDMAS

$$[3+(-3)^0-5(3-7)^2]+1$$

$[3+(-3)^0-5(-4)^2]+1$

$[3+1-5(16)]+1$

$[3+1-80]+1$

$-76+1$

-75

BEDMAS

$-5^2+(4+(-2)^2-3)^3$

$-5^2+(4+4-3)^3$

$-5^2+(5)^3$

$-25+125=100$

$$[(-4-(-3))^2]^2-(-5^3+2)^3$$

$(-4+3)^2 - (-125+2)^3$

$(-1)^2 - (-123)^3$

$[1] - (-1860867)$

$1 + 1860867$

1860868

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?

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

690

2x16 + π x 1

32 + 3.14

35.14

690

35.14

19.6...

Yes!

Class/Homework

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3 (a, c, e)
4 (a, c, e,)
5 (e, g)
8 (a, c, e)
10(a,c,e)
14(a,c,e)
15
16(all) SHOW WORK