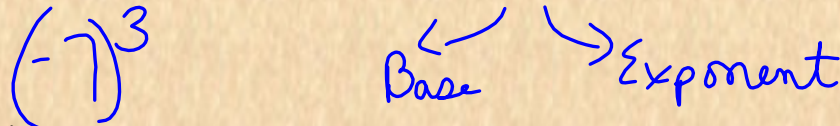


# Warm-Up

October 2, 2018

1. What are the two parts of a power?



2. Write  $5^6$  as a repeated multiplication and evaluate.

$5 \times 5 \times 5 \times 5 \times 5 \times 5 = 15625$

Standard form/

3.

Power	Base	Exponent	Repeated Multiplication	Evaluate Value
a) $5^4$	5	4	$5 \times 5 \times 5 \times 5$	625
b) $6^3$	6	3	$6 \times 6 \times 6$	216
c) $(-5)^4$	-5	4	$-5 \times -5 \times -5 \times -5$	625
d) $(-6)^3$	-6	3	$-6 \times -6 \times -6$	-216
e) $-(-6)^3$	-6	3	$-(-6 \times -6 \times -6)$	216
f) $-5^4$	5	4	$-(5 \times 5 \times 5 \times 5)$	-625

\* What if a power has a negative sign? \*

	A. $(-3)^4$	B. $-3^4$	C. $-(-3)^4$	D. $-(3)^4$
Base	-3	3	-3	3
Repeated multiplication	$-3 \times -3 \times -3 \times -3$	$-(3 \times 3 \times 3 \times 3)$	$-(-3 \times -3 \times -3 \times -3)$	$-(3 \times 3 \times 3 \times 3)$
Evaluate	81	-81	-81	-81

NEVER USE YOUR CALCULATOR TO DETERMINE THE SIGN OF THE ANSWER!!

Evaluate The following:  
Standard Form.

A.  $10^5$

100 000

B.  $(-5)^3$

-125

C.  $-(2.3)^6$

-148.03

D.  $(-3)^2$

9



Predict whether the final answer will be positive or negative:

a.  $(-2)^3$  ← odd  
 $-2 \times -2 \times -2$   
negative

B.  $-(2)^4$   
 $-(2 \times 2 \times 2 \times 2)$   
negative

C.  $-(-3)^4$   
 $-(-3 \times -3 \times -3 \times -3)$   
negative

D.  $-3^3$   
negative



Explain why  $3^4$  and  $4^3$  are not the same.

Hint: Repeated Multiplication

$$3 \times 3 \times 3 \times 3 = 81$$

$$4 \times 4 \times 4 = 64$$

Do brackets matter? Evaluate each of the following to answer this question.

$$(-4)^4$$

$$-4 \times -4 \times -4 \times -4$$

$$256$$

$$-(4)^4$$

$$-(4 \times 4 \times 4 \times 4)$$

$$-256$$

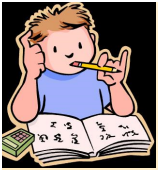
$$-4^4$$

$$-256$$

$$-(-4)^3$$

$$64$$

Yes brackets matter when the base is negative!!!



# Homework questions Answers Page 473 Page 55-56

7, 8, 9,

#7. power	base	#8. power	exponent	#9. power	R.M
a) $2^7$	2				

12, 13, 14, 16, 20 [a, c, e]

$2^3 = 8$   
 $3^2 = 9$   
 a)  $4 \times 4 \times 4 \times 4 = 4^4$   
 chart  

5x5	Power	Evaluate
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a)  $4 = 2^2$  all extra #18

## Test Signed!

