<u>Warm Up</u>

1. Write 5^4 as repeated multiplication.

2. Write (-3)(-3)(-3)(-3)(-3) as a power.

3. Write -7^6 as a repeated multiplication.

4. Evaluate $(-1)^{125497}$

5. Evaluate -3^6

1. Write 5^4 as repeated multiplication.

$$5 \times 5 \times 5 \times 5$$

$$(5)(5)(5)(5)$$

2. Write (-3)(-3)(-3)(-3)(-3) as a power.

$$(-3)^5$$

3. Write -7^6 as a repeated multiplication.

$$-(7)(7)(7)(7)(7)(7)$$

Even

$(-7)^{⑥}$ -7^6

$= 117649$ $= -117649$

4. Evaluate $(-1)^{125497}$ ODD

-1

5.　Evaluate -3^6

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

~ 729

9. Write each power as repeated multiplication.

a) 3^2

b) 10^4

c) 8^5

d) $(-6)^5$

e) -6^5

f) -4^2

d) $(-6)(-6)(-6)(-6)(-6)$

e) $-(6)(6)(6)(6)(6)$

f) $-(4)(4)$

11. Use repeated multiplication to show why 6^4 is not the same as 4^6.

$6^4 \quad 6 \times 6 \times 6 \times 6$

$4^6 \quad 4 \times 4 \times 4 \times 4 \times 4 \times 4$

12. Write as a power.

a) $4 \times 4 \times 4 \times 4$ 4^4

b) $2 \times 2 \times 2$ 2^3

c) $5 \times 5 \times 5 \times 5 \times 5 \times 5$ 5^6

d) $10 \times 10 \times 10$ 10^3

e) $(-79)(-79)$ $(-79)^2$

f) $-(-2)(-2)(-2)(-2)(-2)(-2)(-2)(-2)$

$-(-2)^8$

13. Write each product as a power, then evaluate.

a) 5×5　　　$5^2 = 25$

b) $3 \times 3 \times 3 \times 3$　　　$3^4 = 81$

c) $10 \times 10 \times 10 \times 10 \times 10$　　$10^5 = 100000$

d) $-(9 \times 9 \times 9)$　　$-(9)^3 = -729$

e) $(-2)(-2)(-2)$　　$(-2)^3 = -8$

f) $-(-4)(-4)(-4)$　　$-(-4)^3$　← Even

g) $(-5)(-5)(-5)(-5)$　　$(-5)^4$　← Even　$= +625$

h) $-(5)(5)(5)(5)$　　$-(5)^4 = -625$

i) $-(-5)(-5)(-5)(-5)$

$(-1)(-5)^4$ ← Even

$(-1)(+625)$

$= -625$

14. Predict whether each answer is positive or negative, then evaluate.

a) 2^3 b) 10^6 c) 3^1 d) -7^3

e) $(-7)^3$ f) $(-2)^8$ g) -2^8 h) -6^4

i) $(-6)^4$ j) $-(-6)^4$ k) $(-5)^3$ l) -4^4

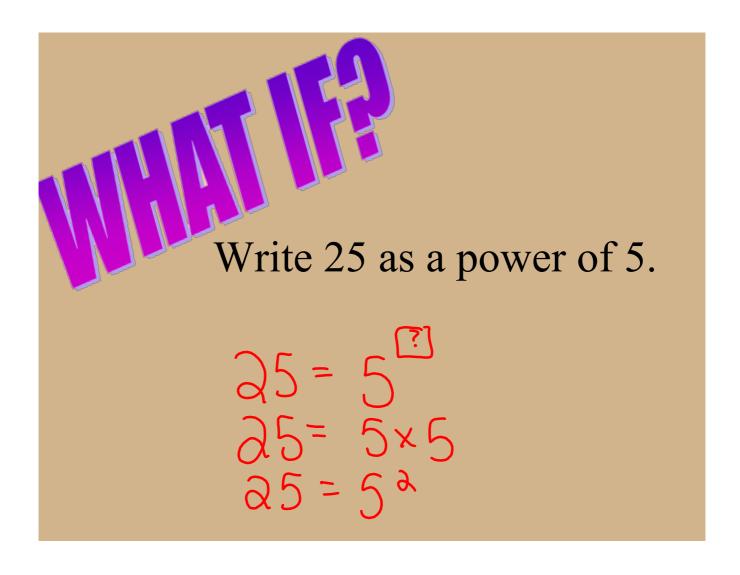**15.** Canada Post often creates special postage stamps to celebrate important events and honour famous people.

a) Captain George Vancouver was a Dutch explorer who named almost 400 Canadian places. To commemorate his 250th birthday in 2007, Canada Post created a $1.55 stamp.

  i) How many stamps are in a 3 by 3 block? Write the number of stamps as a power.

  ii) What is the value of these stamps?

b) In July 2007, Canada hosted the FIFA U-20 World Cup Soccer Championships. Canada Post issued a 52¢ stamp to honour all the players and fans.

  i) How many stamps are in a 4 by 4 block? Write the number of stamps as a power.

  ii) What is the value of these stamps?

16. Evaluate.

a) 3^{12}

b) -7^7

c) 5^{11}

d) $-(-4)^{10}$

e) $(-9)^8$

f) 2^{23}

WHAT IF?

Write 25 as a power of 5.

$$25 = 5^{\boxed{?}}$$
$$25 = 5 \times 5$$
$$25 = 5^2$$

Express as a power of 2.

$16 = 2^{\square}$

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

$16 = 2^4$

$4 = 2^2$

$16 = 2^4$

$8 = 2^3$

$128 = 2^7$

Me again... Try these!

Please complete questions...

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