11.4

MULTIPLYING INTEGERS

The many forms to multiply to get a product

Product - _____

Multiplication problems can be written:

3×4 $\quad 3(4)$ $\quad (3)(4)$

$3 \bullet 4$ $\quad (3)4$

RULES FOR MULTIPLYING INTEGERS

Multiply numbers like regular multiplication… however…

POSITIVE X POSITIVE = POSITIVE
POSITIVE X NEGATIVE = NEGATIVE
NEGATIVE X POSITIVE = NEGATIVE
NEGATIVE x NEGATIVE = POSITIVE

1) 2×-3

2) -5×4

3) -3×-7

4) -8×3

5) -6×-5

6) 12×-4

7) -1×-15

8) $3 \times -2 \times -4$

9) $-5 \times -8 \times -2$

Review – Parts of an Exponent

4^3

_____ _____ _____

Practice

Write each power as repeated multiplication

1) $(5)^3$

2) m^6

3) a^2b^3

4) $(-4)^3$

5) $\left(\frac{1}{2}\right)^4$

Important!!

$(-4)^2$ *vs* -4^2

Evaluation each expression

16) -2^4

17) $(-2)^4$

Using Exponents:

Write *power* as repeated multiplication. Multiply.

6) $(-6)^2$

7) -5^2

8) $(-2)^5$

9) $(-2)^3$

10) -7^2

Real-Life Applications

total change = change per year • number of years

A manatee population decreases by 15 manatees each year for 3 years. Find the total change in the manatee population.