## Warmup 9/( $\sqrt{144}-12+6 \times 2)$

***EACH PAIR should have a whiteboard, marker, eraser inside your desk!!!***
I. What is the main rule to be able to tell if something is a function or not? Try to write it without looking at your notes.
For 2 - 4, use the given functions.
$j(x)=8-x^{3} \quad k(x)=n!$
2. Find $\mathrm{j}(3)$.
3. Find $\mathrm{j}(-4)$.
4. Find $k(3)$.

## Whiteboards!

- Remember, ONLY MATH on the whiteboards.
- Partners:
- Take turns writing!
- Make sure you discuss so you both understand.


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## Writing a function rule

- Write a rule in function notation to model the situation. Describe what the input and output represent.
- Kim walks 4 miles every hour.
$m(h)=4 h$
Input: \# of hours
Output: \# of miles walked
- Write a rule in function notation to model the situation. Describe what the input and output represent.
- A moving company charges $\$ 130$ for truck rental plus $\$ 1.50$ per mile driven.
$c(m)=130+1.50 m$
Input: \# of miles driven
Output: total cost


## Writing a function rule

- Write a rule in function notation to model the situation. Describe what the input and output represent.
- There are 100 brownies on a tray. 2 brownies are eaten every minute.


## Input: \# of minutes

Output: \# of brownies left OR \# of brownies eaten

If output is "brownies eaten": $b(\mathrm{~m})=2 \mathrm{~m}$ If output is "brownies left": $b(\mathrm{~m})=100-2 \mathrm{~m}$

There are 100 brownies on a tray.
2 brownies are eaten every minute.

- "Output: \# of brownies" is not specific enough
- "Output: brownies" is even worse and is pretty much just lazy
- Need to specify:\# of brownies LEFT or \# of brownies EATEN, because in this situation, it could be both!


## WRITETHIS ONE DOWN:

- Write a rule in function notation to model the situation. Describe what the input and output represent.


## Writing a Function Rule:

Willard has \$150 to spend on iTunes. He is downloading songs, each of which cost \$1.29.

INPUT:\# of songs downloaded
IF OUTPUT IS "amount of money spent", the rule is: $f(x)=1.29 x$
IF OUTPUT IS "amount of money left", the rule is:
$f(x)=150-1.29 x$

# Complete/Revise \#II, I2, I3 on the Homework 

- \#I3 has a typo; it should say "same situation as \#|2..."

