



Shoot Your Shot

Bonding & Naming Ionic Compounds

NAME:

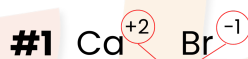
DATE:

BLOCK:

DIRECTIONS: Balance and name the chemical formulas of randomly rolled combinations of ions. It is designed to reinforce formula writing, determining oxidation numbers (charge), and naming.

- Decide which dice will be your cation and which will be your anion. Write the color of each die on the key.
- Roll the cation die. Use the key and periodic table to determine its element name and chemical symbol.
- Roll the anion die. Use the key and periodic table to determine its element name and chemical symbol.
- Using the cation and anion symbols, balance the chemical formula by cross-multiplying the charges.

Cross Multiplying



- If you roll the same compound twice, re-roll until you get a new combination.
- Write the correct name for the compound using the rules for naming ionic compounds.













Naming Rules



metal nonmetal

Calcium Bromide

- Repeat steps 1-6 until you finish all your rolls.

KEY	
Cation Dice:	Anion Dice:
_____	_____
 Li	 F
 Mg	 O
 Al	 N
 Be	 Br
 Ca	 P
 K	 S

MATERIALS RECEIPT:

Large Foam Dice (2/group) \$8.00 (24pk)

TOTAL

\$8.00



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DATA/OBSERVATIONS:

Roll	Cation Element Name	Cation Symbol	Anion Element Name	Anion Symbol	Chemical Formula	Chemical Name
1	Calcium	Ca^{+2}	Bromine	Br^{-1}	CaBr_2	Calcium Bromide
2						
3						
4						
5						
6						
7						
8						
9						
10						

SUMMARY QUESTIONS:

1. What is the main difference between cations and anions?
2. Briefly explain how you determine the charge of cations and anions using the periodic table.
3. Which type of elements usually form cations—metals, nonmetals, or metalloids? Which type of elements usually form anions?
4. How do oxidation numbers (charges) affect how we balance chemical formulas to form ionic compounds?
5. Summarize the key rules for naming binary ionic compounds made from cations and anions.