

## Solutions

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Each answer shows the steps, then the **result**.

### 2.1

- In the outermost shell

### 2.2

- Positive (a cation)

### 2.3

- $\text{MgCl}_2$  (one  $2+$  needs two  $1-$ )

### 2.4

- Three

### 3.1 C

- the outermost shell

### 3.2 B

- $\text{CaCl}_2$

### 3.3

(a)

- $\text{Al}_2\text{O}_3$

(b)

- Criss-cross the charge magnitudes into subscripts (so total  $+$  equals total  $-$ )

### 3.4

(a)

- $\text{MX}_2$

(b)

- A metal — metals lose electrons to form positive cations like  $\text{M}^{2+}$