

ASSIGNING OXIDATION NUMBERS

Name _____

Assign oxidation numbers to all of the elements in each of the compounds or ions below.

1. HCl ↓ +1 → -1	11. H ₂ SO ₃ → 2- overall ↓ +1 3x(O ²⁻) = -6 S = +4
2. KNO ₃ → -1 overall so... ↓ +1 3x(O ²⁻) = -6 N = +5	12. H ₂ SO ₄ → 2- overall ↓ +1 4x(O ²⁻) = -8 S = +6
3. OH ⁻ ↓ -2 → +1	13. BaO ₂ → 1- ↓ 2+ See rule #7 and #5
4. Mg ₃ N ₂ → -3 ↓ +2	14. KMnO ₄ → -1 overall ↓ +1 4x(O ²⁻) = -8 Mn = +7
5. KClO ₃ → overall -1 so... ↓ +1 3x(O ²⁻) = -6 Cl = +5	15. LiH → 1- ↓ 1+ metal (hydride)
6. Al(NO ₃) ₃ → overall -1 so... ↓ 3+ 3x(O ²⁻) = -6 N = +5	16. MnO ₂ → 2- ↓ 4+ (this is not a peroxide, most likely)
7. S ₈ → ∅ (elemental)	17. OF ₂ ↓ 2+ -1 This is a weird exception. See rule #5
8. H ₂ O ₂ (peroxide) ↓ +1 → -1	18. SO ₃ 3x(O ²⁻) = -6 S = +6
9. PbO ₂ ↓ +4 → 2-	19. NH ₃ → 1+ ↓ 3-
10. NaHSO ₄ → -1 overall ↓ +1 4x(O ²⁻) = -8 H = +1 S = +7	20. Na ↓ ∅ (elemental)