Compare similarities and differences between the three different types of transmembrane protein receptors using a Venn diagram.

**Tyrosine-Kinase**
- dimer requires 2 signals
- uses 6 ATP activates relay proteins
- results in 2 cellular responses signals include growth factors

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- uses 6 ATP activates relay proteins
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- can trigger multiple single activation responses
- utilizes multiple GTP
- involves multiple proteins
- involves energy transduction
- involves water-soluble ligands
- involves transmembrane proteins
- involves conformational change
- involves a cellular response

- involves a cellular response
- involves G-protein coupled receptors
- involves multiple signals
- involves transmembrane proteins
- involves ligands include GTP

- water-soluble ligands
- transmembrane proteins
- conformational change
- result in a cellular response

- ligands include growth factors
- ligands include water-soluble ligands
- ligands include transmembrane proteins
- ligands include conformational change

- activated by single ligand
- activated by multiple ligands
- activated by a cellular response
- activated by a cellular response

- neurotransmitters
- hormone like molecules
- enzymes
- second messengers