## Harold's Geometry

"Cheat Sheet"
26 November 2017

## Parallel Lines with Traversals



## Givens:

- Line $\mathbf{r}$ is parallel to line $\mathbf{s}$.
- Line $\mathbf{t}$ transverses lines $\mathbf{r}$ and $\mathbf{s}$.

| Rule \# | Rule | Angles |
| :---: | :--- | :--- |
| 1 | Corresponding angles are congruent (= alt. int. + vert.) | $1 \& 5,2 \& 6,4 \& 8,3 \& 7$ |
| 2 | Vertical angles are congruent | $1 \& 3,2 \& 4,5 \& 7,6 \& 8$ |
| 3 | Alternate interior angles are congruent | $3 \& 5,4 \& 6$ |
| 4 | Alternate exterior angles are congruent | $1 \& 7,2 \& 8$ |
| 5 | Supplementary angles add to $180^{\circ}$ | $1 \& 2,2 \& 3,3 \& 4,4 \& 1,5 \& 6,6 \& 7,7 \& 8,8 \& 5$ |
| 6 | Complimentary angles add to $90^{\circ}$ | a\&j (blue), i\&f (red) |

