Arch 463 ECS Fall 2016

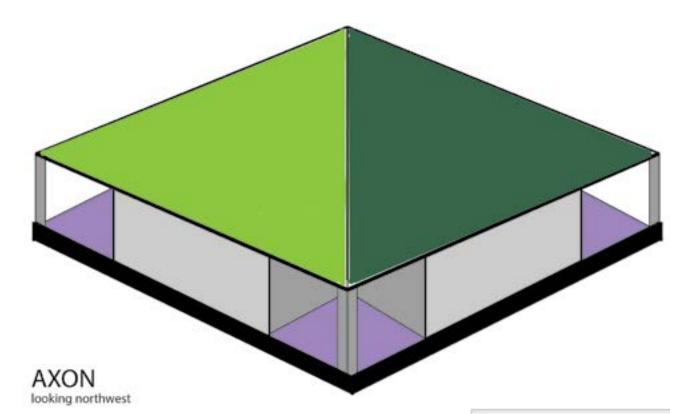
Name\_

Quiz #1

## "Migration Patterns near Moscow"

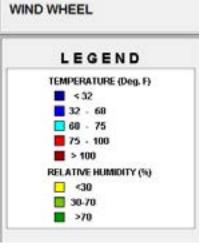
For this problem you are the climate consultant and migration choreographer for a new home owner. The home is sited on flat site near the Moscow-Pullman airport. There are no strong microclimatic effects caused by the site location or topography.

Climate Context. Summer and winter climate analyses are given in this quiz.



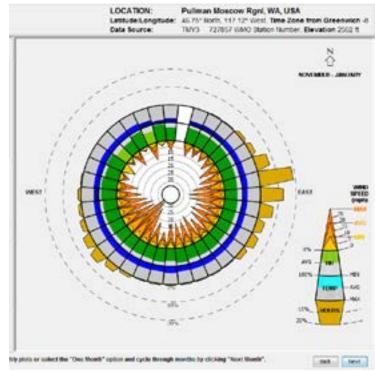
**Modular Design.** The home has a crucifix plan with a porch at each corner. The roof extends above each porch.

**Homeowner's Goal.** The home owner wants advice on which porch to occupy in comfort 1) for his morning coffee and toast, 2) for noontime lunch and cold beverage, and 3) for pre-dinner or post-dinner cocktails.

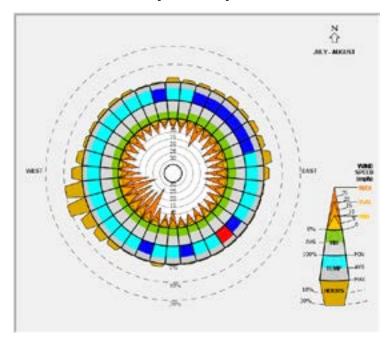


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**Analysis** 1. This is the winter wind (Nov-Jan) wheel for Moscow. Explain one thermal 4 points problem and one thermal advantage that the unenclosed porches pose in winter.



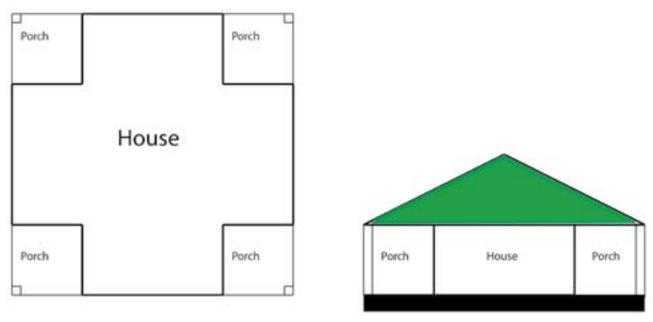
2. This is the July-August wind wheel for Moscow. Explain one thermal problem and one thermal advantage that the unenclosed porches pose in summer.



3 points

## Summer Migration/Choreography

3. **Indicate on the plan below** which porch to occupy in comfort 1) for his morning coffee and toast just after sunrise, 2) for noontime lunch and cold beverage, and 3) for post-dinner cocktails. **Explain** why each chosen location is ideal for its time of day and season.



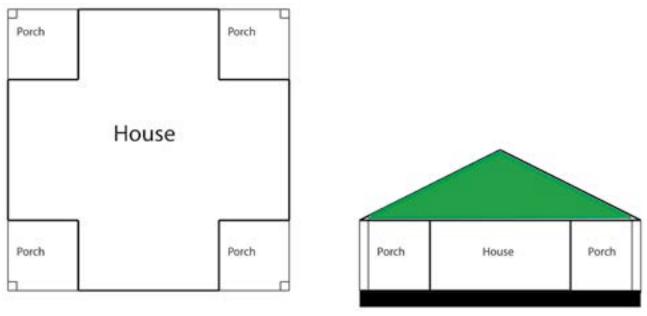
PLAN (north is up) AM ELEVATION

Noon

PM

## Winter Migration/Choreography

4. **Indicate on the plan below** which porch to occupy in comfort 1) for his morning coffee and toast just after sunrise, 2) for noontime lunch and cold beverage, and 3) for pre-dinner cocktails. **Explain** why each chosen location is ideal for its time of day and season.



PLAN (north is up) AM ELEVATION

Noon

PM