A school district with three high schools, ( $M, H$, and $R$ ) instituted a school choice program two years ago. The trends of students moving among the schools has been:
$15 \%$ of the students at $M$ transfer to $H$ and $10 \%$ transfer to $R$ $15 \%$ of the students at $H$ transfer to $M$ and 5\% transfer to $R$ $5 \%$ of the students at $R$ transfer to $M$ and $10 \%$ transfer to $H$

Assume that these trends continue.

1. If M currently has $50 \%$ of the students, H has $30 \%$ and R has $20 \%$, what will the distribution of students be after 1 year? 3 years? 10 years? 20 years?
2. How does the answer change if currently M has $10 \%, \mathrm{H}$ has $20 \%$ and $R$ has $70 \%$ ?
3. What if all students are currently enrolled at R ?
4. What will the impact be to the scenario in \#1 if M improves its retention so that $10 \%$ of its students transfer to H and $5 \%$ transfer to R ?
