

**Input data and preliminary stuff:**

$$\text{Team} := \begin{pmatrix} \text{"Kansas"} \\ \text{"Texas A\&M"} \\ \text{"Texas"} \\ \text{"Kansas St."} \\ \text{"Texas Tech"} \\ \text{"Missouri"} \\ \text{"Oklahoma"} \\ \text{"Oklahoma St."} \\ \text{"Nebraska"} \\ \text{"Iowa St."} \\ \text{"Baylor"} \\ \text{"Colorado"} \end{pmatrix} \quad \text{py} := \begin{pmatrix} 0.9872 \\ 0.9827 \\ 0.9482 \\ 0.8965 \\ 0.8722 \\ 0.9000 \\ 0.9370 \\ 0.8338 \\ 0.8071 \\ 0.6254 \\ 0.7313 \\ 0.3956 \end{pmatrix}$$

ORIGIN := 1

i := 1..last(py)    j := 1..last(py)

**There are only 12 teams, so we won't worry about computational efficiency and instead just calculate the log5 winning percentage for all 144 matchups (even though many won't be used):**

$$\log_5(A, B) := \frac{A - A \cdot B}{A + B - 2 \cdot A \cdot B} \quad \text{PCT}_{i,j} := \log_5(\text{py}_i, \text{py}_j)$$

**Calculate chances that each team will make it to Friday, Saturday, and Sunday:**

$$\text{Fri} := \begin{pmatrix} 1 \\ 1 \\ 1 \\ 1 \\ \text{PCT}_{5,12} \\ \text{PCT}_{6,11} \\ \text{PCT}_{7,10} \\ \text{PCT}_{8,9} \\ \text{PCT}_{9,8} \\ \text{PCT}_{10,7} \\ \text{PCT}_{11,6} \\ \text{PCT}_{12,5} \end{pmatrix} \quad \text{Sat} := \begin{pmatrix} \text{PCT}_{8,9} \cdot \text{PCT}_{1,8} + \text{PCT}_{9,8} \cdot \text{PCT}_{1,9} \\ \text{PCT}_{7,10} \cdot \text{PCT}_{2,7} + \text{PCT}_{10,7} \cdot \text{PCT}_{2,10} \\ \text{PCT}_{6,11} \cdot \text{PCT}_{3,6} + \text{PCT}_{11,6} \cdot \text{PCT}_{3,11} \\ \text{PCT}_{5,12} \cdot \text{PCT}_{4,5} + \text{PCT}_{12,5} \cdot \text{PCT}_{4,12} \\ \text{PCT}_{5,12} \cdot \text{PCT}_{5,4} \\ \text{PCT}_{6,11} \cdot \text{PCT}_{6,3} \\ \text{PCT}_{7,10} \cdot \text{PCT}_{7,2} \\ \text{PCT}_{8,9} \cdot \text{PCT}_{8,1} \\ \text{PCT}_{9,8} \cdot \text{PCT}_{9,1} \\ \text{PCT}_{10,7} \cdot \text{PCT}_{10,2} \\ \text{PCT}_{11,6} \cdot \text{PCT}_{11,3} \\ \text{PCT}_{12,5} \cdot \text{PCT}_{12,4} \end{pmatrix}$$

$$\text{Sun} := \text{Sat} \cdot \begin{pmatrix} \text{Sat}_4 \cdot \text{PCT}_{1,4} + \text{Sat}_5 \cdot \text{PCT}_{1,5} + \text{Sat}_{12} \cdot \text{PCT}_{1,12} \\ \text{Sat}_3 \cdot \text{PCT}_{2,3} + \text{Sat}_6 \cdot \text{PCT}_{2,6} + \text{Sat}_{11} \cdot \text{PCT}_{2,11} \\ \text{Sat}_2 \cdot \text{PCT}_{3,2} + \text{Sat}_7 \cdot \text{PCT}_{3,7} + \text{Sat}_{10} \cdot \text{PCT}_{3,10} \\ \text{Sat}_1 \cdot \text{PCT}_{4,1} + \text{Sat}_8 \cdot \text{PCT}_{4,8} + \text{Sat}_9 \cdot \text{PCT}_{4,9} \\ \text{Sat}_1 \cdot \text{PCT}_{5,1} + \text{Sat}_8 \cdot \text{PCT}_{5,8} + \text{Sat}_9 \cdot \text{PCT}_{5,9} \\ \text{Sat}_2 \cdot \text{PCT}_{6,2} + \text{Sat}_7 \cdot \text{PCT}_{6,7} + \text{Sat}_{10} \cdot \text{PCT}_{6,10} \\ \text{Sat}_3 \cdot \text{PCT}_{7,3} + \text{Sat}_6 \cdot \text{PCT}_{7,6} + \text{Sat}_{11} \cdot \text{PCT}_{7,11} \\ \text{Sat}_4 \cdot \text{PCT}_{8,4} + \text{Sat}_5 \cdot \text{PCT}_{8,5} + \text{Sat}_{12} \cdot \text{PCT}_{8,12} \\ \text{Sat}_4 \cdot \text{PCT}_{9,4} + \text{Sat}_5 \cdot \text{PCT}_{9,5} + \text{Sat}_{12} \cdot \text{PCT}_{9,12} \\ \text{Sat}_3 \cdot \text{PCT}_{10,3} + \text{Sat}_6 \cdot \text{PCT}_{10,6} + \text{Sat}_{11} \cdot \text{PCT}_{10,11} \\ \text{Sat}_2 \cdot \text{PCT}_{11,2} + \text{Sat}_7 \cdot \text{PCT}_{11,7} + \text{Sat}_{10} \cdot \text{PCT}_{11,10} \\ \text{Sat}_1 \cdot \text{PCT}_{12,1} + \text{Sat}_8 \cdot \text{PCT}_{12,8} + \text{Sat}_9 \cdot \text{PCT}_{12,9} \end{pmatrix}$$

Calculate chance that team will win the championship:

$$\text{Champ} := \text{Sun} \cdot \left( \begin{array}{l} \text{Sun}_2 \cdot \text{PCT}_{1,2} + \text{Sun}_3 \cdot \text{PCT}_{1,3} + \text{Sun}_6 \cdot \text{PCT}_{1,6} + \text{Sun}_7 \cdot \text{PCT}_{1,7} + \text{Sun}_{10} \cdot \text{PCT}_{1,10} + \text{Sun}_{11} \cdot \text{PCT}_{1,11} \\ \text{Sun}_1 \cdot \text{PCT}_{2,1} + \text{Sun}_4 \cdot \text{PCT}_{2,4} + \text{Sun}_5 \cdot \text{PCT}_{2,5} + \text{Sun}_8 \cdot \text{PCT}_{2,8} + \text{Sun}_9 \cdot \text{PCT}_{2,9} + \text{Sun}_{12} \cdot \text{PCT}_{2,12} \\ \text{Sun}_1 \cdot \text{PCT}_{3,1} + \text{Sun}_4 \cdot \text{PCT}_{3,4} + \text{Sun}_5 \cdot \text{PCT}_{3,5} + \text{Sun}_8 \cdot \text{PCT}_{3,8} + \text{Sun}_9 \cdot \text{PCT}_{3,9} + \text{Sun}_{12} \cdot \text{PCT}_{3,12} \\ \text{Sun}_2 \cdot \text{PCT}_{4,2} + \text{Sun}_3 \cdot \text{PCT}_{4,3} + \text{Sun}_6 \cdot \text{PCT}_{4,6} + \text{Sun}_7 \cdot \text{PCT}_{4,7} + \text{Sun}_{10} \cdot \text{PCT}_{4,10} + \text{Sun}_{11} \cdot \text{PCT}_{4,11} \\ \text{Sun}_2 \cdot \text{PCT}_{5,2} + \text{Sun}_3 \cdot \text{PCT}_{5,3} + \text{Sun}_6 \cdot \text{PCT}_{5,6} + \text{Sun}_7 \cdot \text{PCT}_{5,7} + \text{Sun}_{10} \cdot \text{PCT}_{5,10} + \text{Sun}_{11} \cdot \text{PCT}_{5,11} \\ \text{Sun}_1 \cdot \text{PCT}_{6,1} + \text{Sun}_4 \cdot \text{PCT}_{6,4} + \text{Sun}_5 \cdot \text{PCT}_{6,5} + \text{Sun}_8 \cdot \text{PCT}_{6,8} + \text{Sun}_9 \cdot \text{PCT}_{6,9} + \text{Sun}_{12} \cdot \text{PCT}_{6,12} \\ \text{Sun}_1 \cdot \text{PCT}_{7,1} + \text{Sun}_4 \cdot \text{PCT}_{7,4} + \text{Sun}_5 \cdot \text{PCT}_{7,5} + \text{Sun}_8 \cdot \text{PCT}_{7,8} + \text{Sun}_9 \cdot \text{PCT}_{7,9} + \text{Sun}_{12} \cdot \text{PCT}_{7,12} \\ \text{Sun}_2 \cdot \text{PCT}_{8,2} + \text{Sun}_3 \cdot \text{PCT}_{8,3} + \text{Sun}_6 \cdot \text{PCT}_{8,6} + \text{Sun}_7 \cdot \text{PCT}_{8,7} + \text{Sun}_{10} \cdot \text{PCT}_{8,10} + \text{Sun}_{11} \cdot \text{PCT}_{8,11} \\ \text{Sun}_2 \cdot \text{PCT}_{9,2} + \text{Sun}_3 \cdot \text{PCT}_{9,3} + \text{Sun}_6 \cdot \text{PCT}_{9,6} + \text{Sun}_7 \cdot \text{PCT}_{9,7} + \text{Sun}_{10} \cdot \text{PCT}_{9,10} + \text{Sun}_{11} \cdot \text{PCT}_{9,11} \\ \text{Sun}_1 \cdot \text{PCT}_{10,1} + \text{Sun}_4 \cdot \text{PCT}_{10,4} + \text{Sun}_5 \cdot \text{PCT}_{10,5} + \text{Sun}_8 \cdot \text{PCT}_{10,8} + \text{Sun}_9 \cdot \text{PCT}_{10,9} + \text{Sun}_{12} \cdot \text{PCT}_{10,12} \\ \text{Sun}_1 \cdot \text{PCT}_{11,1} + \text{Sun}_4 \cdot \text{PCT}_{11,4} + \text{Sun}_5 \cdot \text{PCT}_{11,5} + \text{Sun}_8 \cdot \text{PCT}_{11,8} + \text{Sun}_9 \cdot \text{PCT}_{11,9} + \text{Sun}_{12} \cdot \text{PCT}_{11,12} \\ \text{Sun}_2 \cdot \text{PCT}_{12,2} + \text{Sun}_3 \cdot \text{PCT}_{12,3} + \text{Sun}_6 \cdot \text{PCT}_{12,6} + \text{Sun}_7 \cdot \text{PCT}_{12,7} + \text{Sun}_{10} \cdot \text{PCT}_{12,10} + \text{Sun}_{11} \cdot \text{PCT}_{12,11} \end{array} \right)$$

Check the math:

$$\sum \text{Champ} = 1.0000$$

Format and display results:

Results := augment(Team, Fri, Sat, Sun, Champ)

Results2 := reverse(csort(Results, 5))

	<u>Fri</u>	<u>Sat</u>	<u>Sun</u>	<u>Champ</u>
"Kansas"	1.0000	0.9433	0.8561	0.5708
"Texas A&M"	1.0000	0.8106	0.6398	0.3137
"Texas"	1.0000	0.7169	0.2173	0.0579
"Kansas St."	1.0000	0.5917	0.0782	0.0167
"Texas Tech"	0.9125	0.4021	0.0444	0.0079
"Missouri"	0.7678	0.2531	0.0465	0.0078
"Oklahoma"	0.8991	0.1866	0.0941	0.0221
"Oklahoma St."	0.5453	0.0333	0.0131	0.0018
"Nebraska"	0.4547	0.0234	0.0082	0.0010
"Iowa St."	0.1009	0.0029	0.0003	0.0000
"Baylor"	0.2322	0.0301	0.0020	0.0001
"Colorado"	0.0875	0.0061	0.0001	$2.0577 \times 10^{-6}$

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"Iowa St."	0.1009	0.0029	0.0003	0.0000
"Colorado"	0.0875	0.0061	0.0001	$2.0577 \times 10^{-6}$