# Exercises for Wednesday, first hour 

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## Random walk with gravity

1. Use a $3 \times 3$ matrix.
2. This requires you to do some algebra. I'm sorry.
3. The figure on the left shows $k=40$.

Tiny chess Try drawing the possible moves of the knight in a different geometric shape.

There are two different kinds of bishop.

Morse code (Cover and Thomas, Ex. 4.8)

1. Write down the state transition matrix.
2. Use high school calculus.
