## Statistics: Book Two, Level 4+

## **Rough Justice**

You need: square grid paper, a classmate

Once upon a time, in a faraway land, King Klutz created a harsh but efficient system of justice. There was no court where charges could be heard. Instead, a prisoner was blindfolded and put in a room with two doors. Behind one door was a tiger; behind the other was a bag of gold. The prisoner had to choose a door, then enter the room behind it. No one ever came out alive from the room with a tiger in it, and if the tiger got the prisoner, the king assumed they were guilty.

One day the king's daughter, Princess Paradox, had an idea.

It's not fair, Father. Not all crimes are the same. You need different rooms for different crimes.

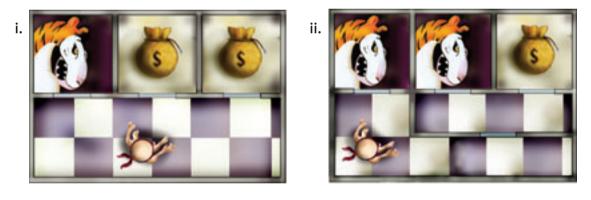
It took me ages to design these rooms. If you can think of something better, show me!

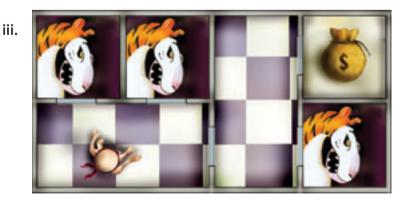
ACTIVITY



First, Princess Paradox made a list of crimes.

Then she designed some rooms.





- a. What are the chances of a prisoner surviving their ordeal in each case?
  b. Which crime would each set of rooms be suitable for? Explain.
- 2. a. Make up your own list of crimes. Design a set of rooms for each crime. Work out the probability of a prisoner surviving each one.
  - **b.** Ask a classmate to answer questions **1a** and **b**, using your set of rooms.