

1 Candy Bag Probability

You have 3 Tootsie Rolls, 8 pieces of candy corn, and 5 Jolly Ranchers in your trick-or-treat bag.

1. If you reach into the bag, what is the probability you will select a Tootsie Roll?

3/16

2. How many candies must you pick from your bag to make sure that you have at least one piece of candy corn and at least one Jolly Rancher?

12 candies

2 Witch's Spells

The witch Parthrikar is practicing spells that can turn one creature into another:

Mouse \rightarrow Bat

Cat \rightarrow Rat

Spider \rightarrow Raven

Bat \rightarrow Cat

Raven \rightarrow Mouse

Rat \rightarrow Mouse

1. Using only the given spells, how many different creatures can she turn a cat into?

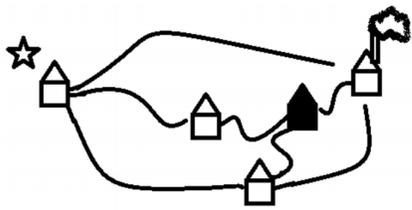
3 other animals: rat, mouse, bat

2. What additional spell would help her to turn any creature into any other through a series of spells? (Hint: Draw a picture)

any spell that produces a spider

3 Witch Stew

Here is a map of some streets and houses.



1. The witch Ambali lives at the house with the star, and she knows the house with the chimney has the best ingredients for her magic potion. Her magic broomstick is broken, and must walk along the streets to get to the house. How many different paths can she take from his house to the chimney house without revisiting a house or a street?

5 paths

2. Ambali actually has to pick up her witch friend, Sheremy, who lives at the black house first. How many different paths to the chimney house can he take now?

3 paths

- The skeleton is a boy and does not like Reese's.
- Pam is not a witch or a vampire.
- Max likes Reese's
- The mummy likes Milky Way
- The witch does not like Skittles

Pam - cat, Starburst

Max - vampire, Reese's

Andy - skeleton, Skittles

Samuel - mummy, Milky Way

Jane - witch, Snickers