Tree Diagrams March 31, 2020

Jason is making loot bags for his birthday. Each loot bag gets a pencil, a chocolate bar, and a balloon. The choices for each are as follows:

- smiley face or stars pencil
- Smarties, KitKat, or Aero
- red, blue or yellow balloon
- A. How many different combinations of loot bag prizes are possible?
- B. What is the probability a loot bag will have:
- a KitKat?
- a yellow balloon?
- a smiley face pencil and a blue balloon?
- a star pencil, Smarties and a red balloon?



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Each morning, Julie likes to pick her clothing randomly from her dresser drawers. She needs to pick a t-shirt, and pair of pants, and a pair of socks. Her choices are:

• T-shirts: red, blue, green, yellow

• Pants: blue, brown

• Socks: white, black

How many possible outfits can she make? What is the probability she will pick:

- -blue pants?
- -a yellow t-shirt and brown pants?
- -black pants and white socks?
- -2 pieces of the outfit that are the same colour?

Express each probability as a fraction and a percent.