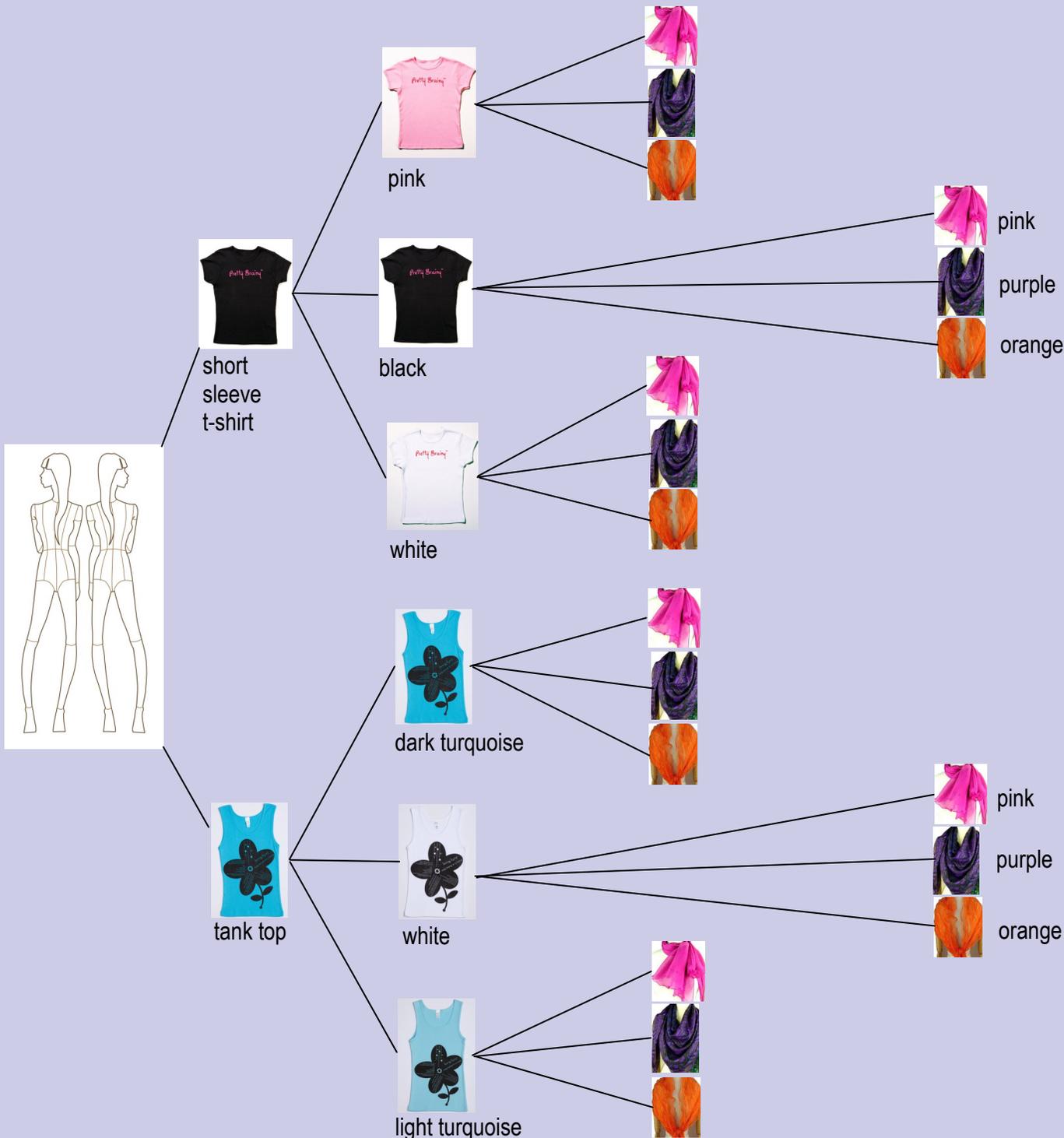# Dress for the Party: A Game of Probability

Alex is going to a party at the home of her friend Ally. She has decided to wear her jeans and boots, but can't decide what else to wear. Check out the Counting Tree below! This shows possible ensembles Alex can create if she randomly chooses a short-sleeve T-shirt or a tank top, a certain color of T-shirt or tank, and either a purple, pink or orange scarf.

♦ What are the chances that Alex will wear a short-sleeve T-shirt in PINK and an ORANGE scarf?

♦ What are the chances that Alex will wear a tank top in either DARK TURQUOISE or WHITE and a PURPLE scarf?

♦ What are the chances Alex will NOT wear a PINK short-sleeve T-shirt and NOT wear a PINK scarf?

pink

pink

purple

orange

short sleeve t-shirt

black

white

dark turquoise

tank top

white

pink

purple

orange

light turquoise

Postscript: How you solve a problem is as important as finding the answer. You may answer the probability questions in percentages, as in, "There is a 20% chance Alex will wear a pink T-shirt and an orange scarf." (That's not necessarily the answer. We're just giving you an example!)

Remember that in working with percentages, you always will begin with 100%. Use a calculator.

- Ask yourself about a problem, "What are the facts I'm being given?" Then list your facts.

- Cross out information you do not need. For example, if you are asked about Alex wearing a purple scarf, cross out the pink and orange scarves.

- Lay out real T-shirts and scarves so you can see the possibilities. Have fun turning this into a dress-up game.

- Ask yourself if your answers make sense.