



Use an organized list to determine the probability of each event.

- a) $P(3 \text{ and yellow})$
 - b) $P(\text{anything except } 3 \text{ and yellow})$
 - c) $P(\text{number} > 3 \text{ and purple})$
7. a) Create a tree diagram to show all the possible outcomes for tossing three coins.
- b) What is the probability of getting one Tail?
 - c) What is the probability of getting two or three Tails?
 - d) What is the probability of not getting any Heads?
8. How does a tree diagram give you the denominator of the fraction form of a probability? How does an organized list give you the denominator?
9. Calculate the probability of having three boys in a family with three children.

receive ribbons. Which is more probable—that both Anthony and Peter will receive ribbons, or that Peter will finish ahead of Francis and Christopher?

C Extending

12. Deanna and Carol are playing a game. They roll a die twice and add the numbers they roll. A sum of 5 scores a point.
- a) What is the probability of rolling a sum of 5?
 - b) Deanna rolled a sum of 5 on her first turn. List the different ways that she could have done this.
 - c) What is the probability that, when Deanna rolled a sum of 5, the number on the first roll was greater than the number on the second roll?
13. To play a new board game, you roll a die. Every fourth square has a penalty if you land on it. What is the probability that you will get at least one penalty in your first two rolls of the die?

The number of p
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1. Write each e
a) $8 \times 7 \times$
b) 12×11
2. Evaluate each
a) $3!$ b)
3. How many d
in a line?
4. How many d
be arranged?
5. There are 10
ways can the