7.SP Tossing Cylinders

Task

Think about a cylindrical (or cylinder-like) object, such as a bottle lid or a roll of tape. Some possible objects are shown in the picture below. Suppose you were to toss one of these objects into the air and observe its landing position once it reaches the floor.

a. For your object, what are the possible outcomes of this experiment?

b. Make a guess – what are the probabilities of each of the possible outcomes?

c. Toss the object into the air and record the outcome. Repeat this process 25 to 30 times.

d. Determine the experimental probability of each outcome. How does this experimental probability compare to your guess from part b? Based on this information, would you like to change your guess?

e. Repeat this activity with a different cylindrical (or cylinder-like) object that you think has a greater probability of landing on its side than your first object.

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