

A. We are going to play the block game, keep record of the number of times the color is chosen.

Red	Yellow	Blue

Can you predict what color will be chosen next? _____



1. What is the **experimental probability**?

$\text{Experimental probability} = \frac{\text{number of times pulled}}{\text{the total number of pulls}}$
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a. Red blocks = _____

b. Blue blocks = _____

c. Yellow blocks = _____

B. Each of you will get a bucket of blocks. Count the number of red blocks, blue blocks and yellow blocks in the bucket.

a. Number of Red blocks = _____

b. Number of Blue blocks = _____

c. Number of Yellow blocks = _____

1. Using the above numbers above calculate the **theoretical probabilities** for each color.

$\text{Theoretical probability} = \frac{\text{number of ways an event can occur}}{\text{number of outcomes}}$

a. Red blocks = _____

b. Blue blocks = _____

c. Yellow blocks = _____

2. How do the theoretical probability compare to the experimental probability in Question A?

3. What is the sum of the theoretical probabilities?

C.

1. Does each block, without regard to color, have the same chance of being chosen?
Explain why or why not.

2. Does each color have the same chance of being chosen? Explain

3. If you choose a block, is it equally likely that it will be red or blue?

D. Suppose you have a different bucket. You can't see inside, but you know there are 30 blocks in all.
How can you use your observations of others picking blocks to predict how many of each color there are?