

## YOUR TURN

7. A spinner has three unequal sections: red, yellow, and blue. The table shows the results of Nolan's spins. Find the experimental probability of landing on each color. Write your answers in simplest form.

Color	Frequency
Red	10
Yellow	14
Blue	6

## Math Talk

Mathematical Processes

Will everyone who does this experiment get the same results?

## Making Predictions with Experimental Probability

A **simulation** is a model of an experiment that would be difficult or inconvenient to actually perform. You can use a simulation to find an experimental probability and make a prediction.



Math On the Spot

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### EXAMPLE 2



TEKS 7.6.B

A baseball team has a batting average of 0.250 so far this season. This means that the team's players get hits in 25% of their chances at bat. Use a simulation to predict the number of hits the team's players will have in their next 34 chances at bat.

- STEP 1** Choose a model.

$$\text{Batting average} = 0.250 = \frac{250}{1,000} = \frac{1}{4}$$

A standard deck of cards has four suits, hearts, diamonds, spades, and clubs. Since  $\frac{1}{4}$  of the cards are hearts, you can let hearts represent a "hit." Diamonds, clubs, and spades then represent "no hit."

- STEP 2** Perform the simulation.

Draw a card from the deck, record the result, and put the card back into the deck. Continue until you have drawn and replaced 34 cards in all.

(H = heart, D = diamond, C = club, S = spade)

H D D S H C H S D H C D C C D H H  
S D D H C C H C H H D S S S C H D

Since the team has 34 chances at bat, you must draw a card 34 times.

- STEP 3** Make a prediction.

Count the number of hearts in the simulation.

Since there are 11 hearts, you can predict that the team will have 11 hits in its next 34 chances at bat.

My Notes