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Computing conditional probability using a sample space

Computing conditional probability using a sample space

A spinner has 8 equally sized slices numbered from 1 to 8.
Some are grey and some are white, as shown below.

The slices numbered 1, 6, and 8 are grey. The slices numbered 2, 3, 4, 5, and 7 are white.

Answer the following questions. Write each answer as a fraction.

The wheel will be spun and will stop on a slice at random.

(a) What is the probability that the wheel stops on a white slice?

$\frac{5}{8}$ white slices / total

(b) What is the probability that the wheel stops on a white slice, given that the wheel stops on a number less than 7?

conditional

to only look at #'s less than 7

$\frac{4}{6}$ white (less than 7) / total

Note: The Solve feature is not available to st

Computing conditional probability using a sample space

Six balls numbered from 1 to 6 are placed in a bag.
Some are white and some are grey, as shown below.

Given

look after already know

The balls numbered 2, 3, and 5 are white. The balls numbered 1, 4, and 6 are grey.

Answer the following questions. Write each answer as a fraction.

A ball will be randomly selected.

(a) What is the probability that the number 4 ball is selected?

$\frac{\#4}{\text{total}}$ $\frac{1}{6} = 0.167$

(b) What is the probability that the number 4 ball is selected, given that the selected ball is grey?

$\frac{\#4 \text{ (grey)}}{\text{grey}} = \frac{1}{3} = 0.33$