We would expect to
get 30

because we are using
8 out of the 10 numbers
30 out of 100

6.2 Probability

The spinner is called
Experimental Probability

$P_{(1,6,10)} = \dfrac{\text{favorable outcomes}}{\text{total trials}}$

$P_{(1,6,10)} = \dfrac{31}{100}$

Theoretical Probability
"What we expect to happen"

$P_{(1,6,10)} = \dfrac{\text{favorable result}}{\text{total possible results}}$

$= \dfrac{3}{10} = 30\%$

If I flip a coin
what do I expect the
probability to be

$P_{(H)} = \dfrac{1}{2} = 50\%$

$H, T, H, H \cdots \cdots -$

Eventually Experimental
gets very close to Theoretical

Complimentary Event
Two events that use all
parts but do not share
any parts

1, 6, 10

(Not) key word for complimentary

Deck of Cards

$P_{(Black)}$

$P_{(Red)}$ is the complimentary event

$P_{(odd \; on \; a \; die)}$

$P_{(even)}$

The two events together
will have a probability of 1
or 100%

$$P(E) + P(Not\ E) = 1$$

$$P(Not\ E) = 1 - P(E)$$

$$P(Not\ E) = 100 - P(E)$$

$$P(1, 6, 10) = 30\%$$

$$P(Not\ 1, 6, 10) = 100 - 30 = 70\%$$

$$P(Not\ even) = 50\%$$

$$P(Less\ than\ 4) = 30\%$$

$$P(more\ than\ 4) = 60\%$$