# Example: Tennis serves
## "Blast," "Spin" or "Gentle" serves

"Gentle"

.55 — **Win**

1.00 — In

.45 — Lose

.00 — Out

$$Pr(win) = (1.00)(.55) = .550.$$

# Example: Tennis serves
## "Blast," "Spin" or "Gentle" serves
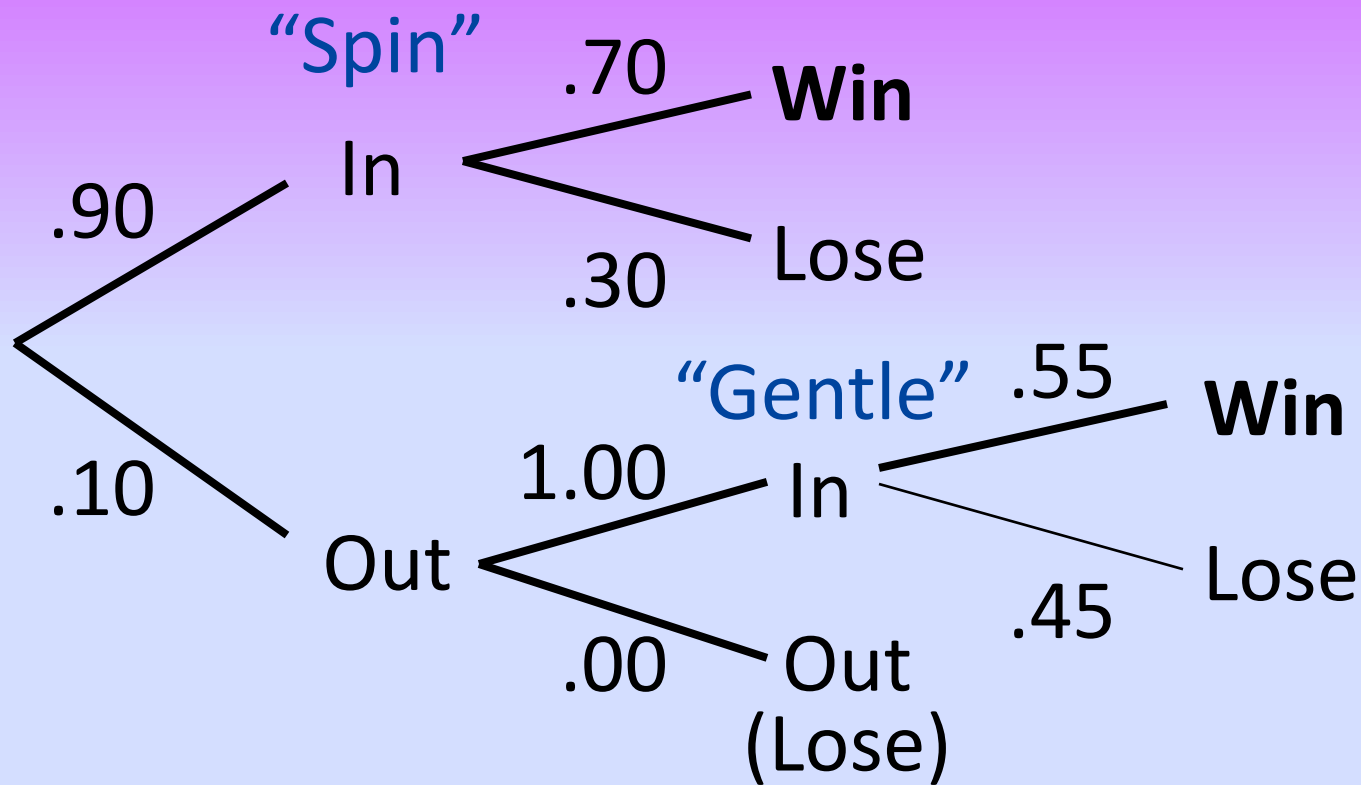


Pr(win) = (.90)(.70)+(.10)(1.00)(.55) = .685.

# Example: Tennis serves
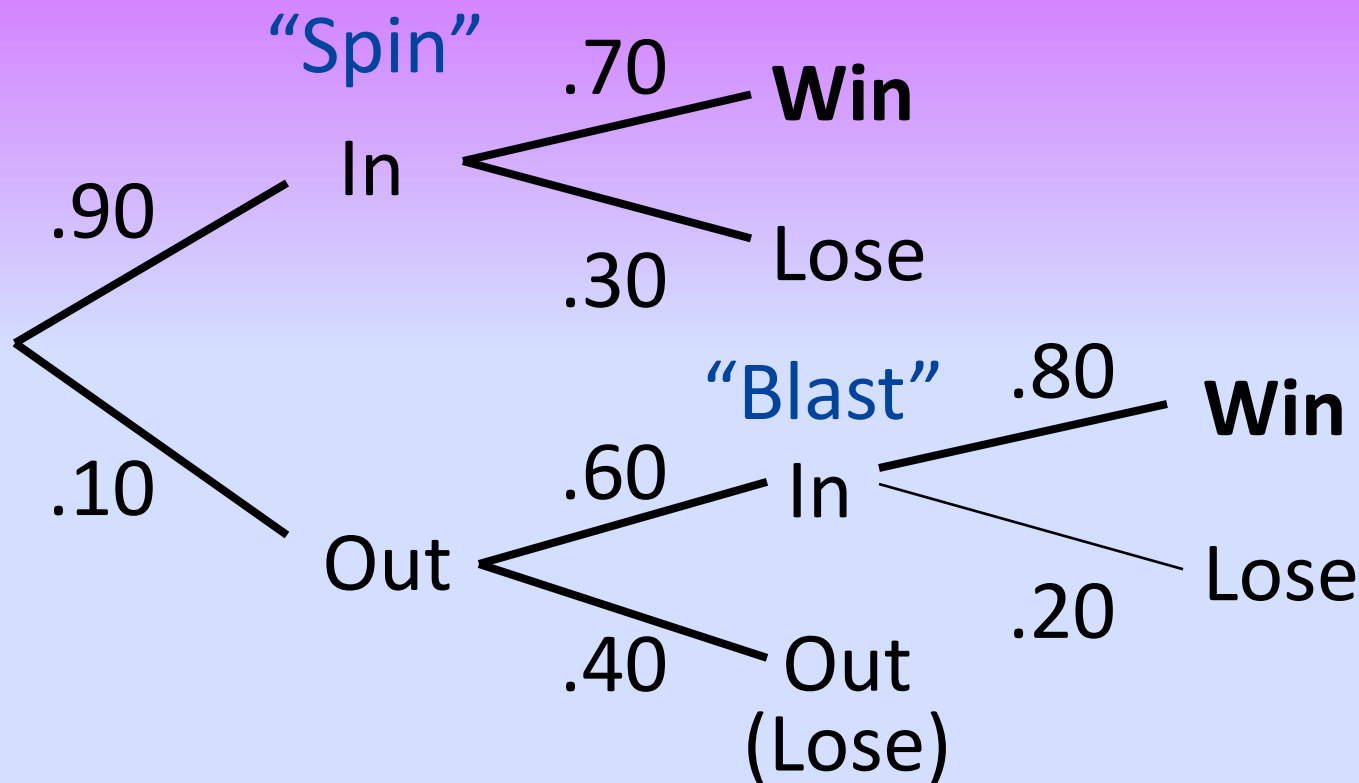## "Blast," "Spin" or "Gentle" serves
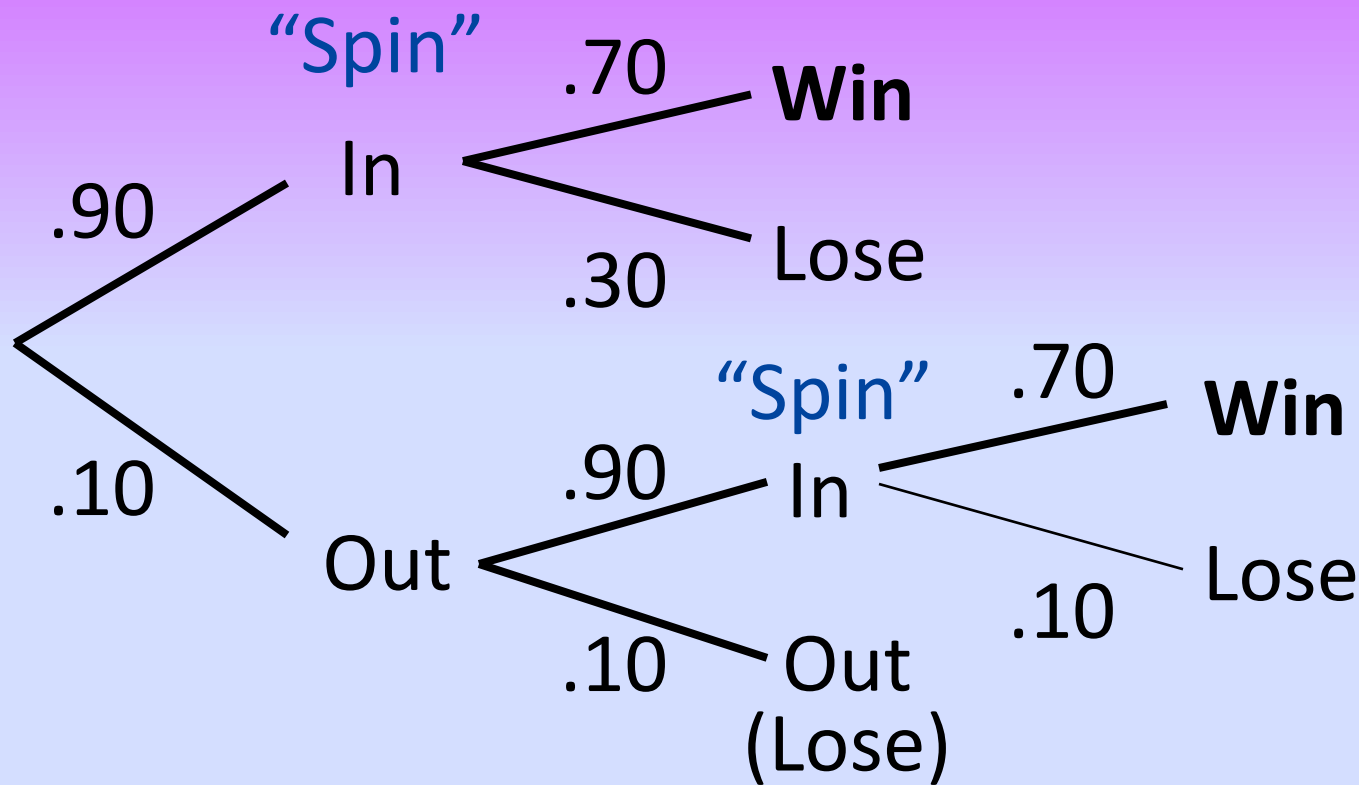


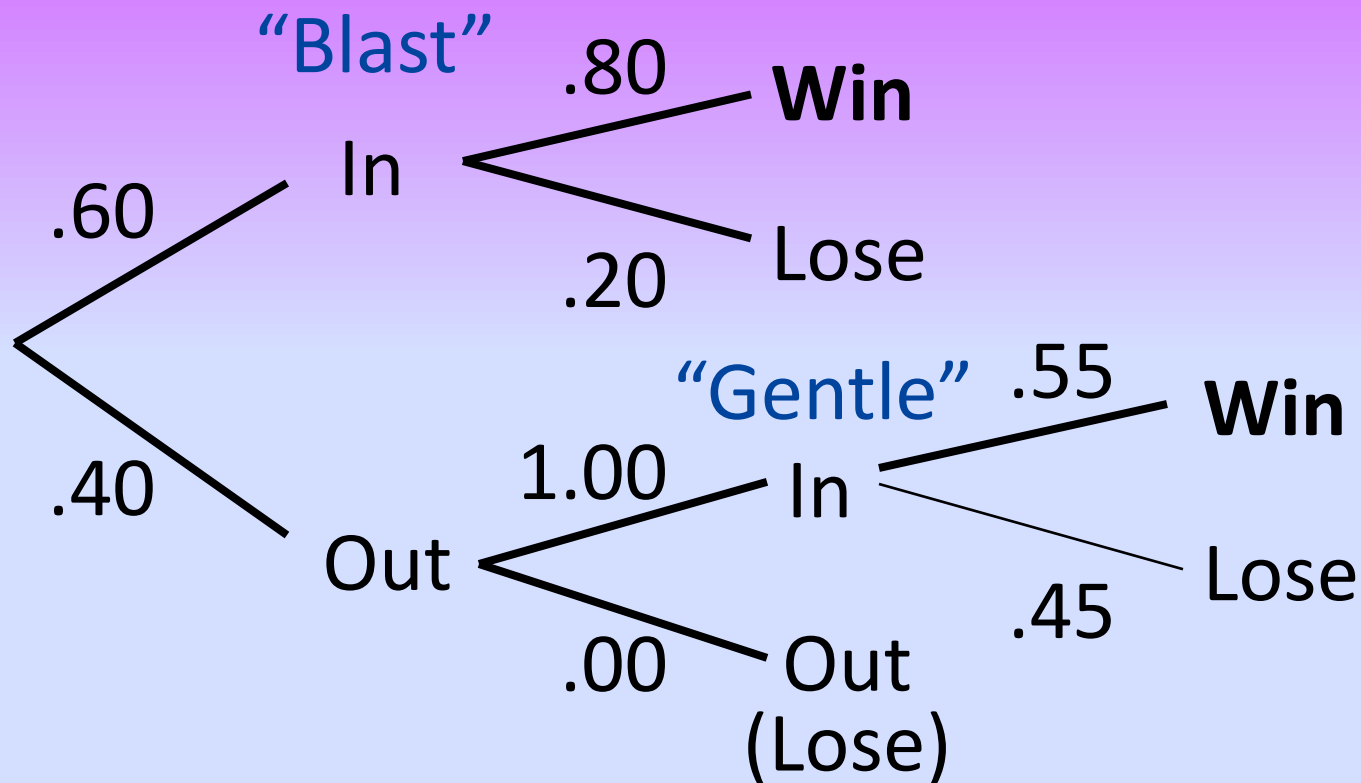Pr(win) = (.90)(.70)+(.10)(.90)(.70) = .693.

# Example: Tennis serves
## "Blast," "Spin" or "Gentle" serves

"Spin" .70 **Win**

.90 In

.30 Lose

.10 "Blast" .80 **Win**

.60 In

Out .20 Lose

.40 Out (Lose)

Pr(win) = (.90)(.70)+(.10)(.60)(.80) = .678.

# Example: Tennis serves
## "Blast," "Spin" or "Gentle" serves

"Blast" .80 **Win**

In

.60

.20 Lose

"Gentle" .55 **Win**

1.00 In

.40

Out

.45 Lose

.00 Out
(Lose)

Pr(win) = (.60)(.80)+(.40)(1.00)(.55) = .700.

# Example: Tennis serves
## "Blast," "Spin" or "Gentle" serves



"Blast"

.80 — **Win**

In

.60

.20 — Lose

.40

"Spin"

.70 — **Win**

.90 — In

Out

.30 — Lose

.10 — Out
(Lose)
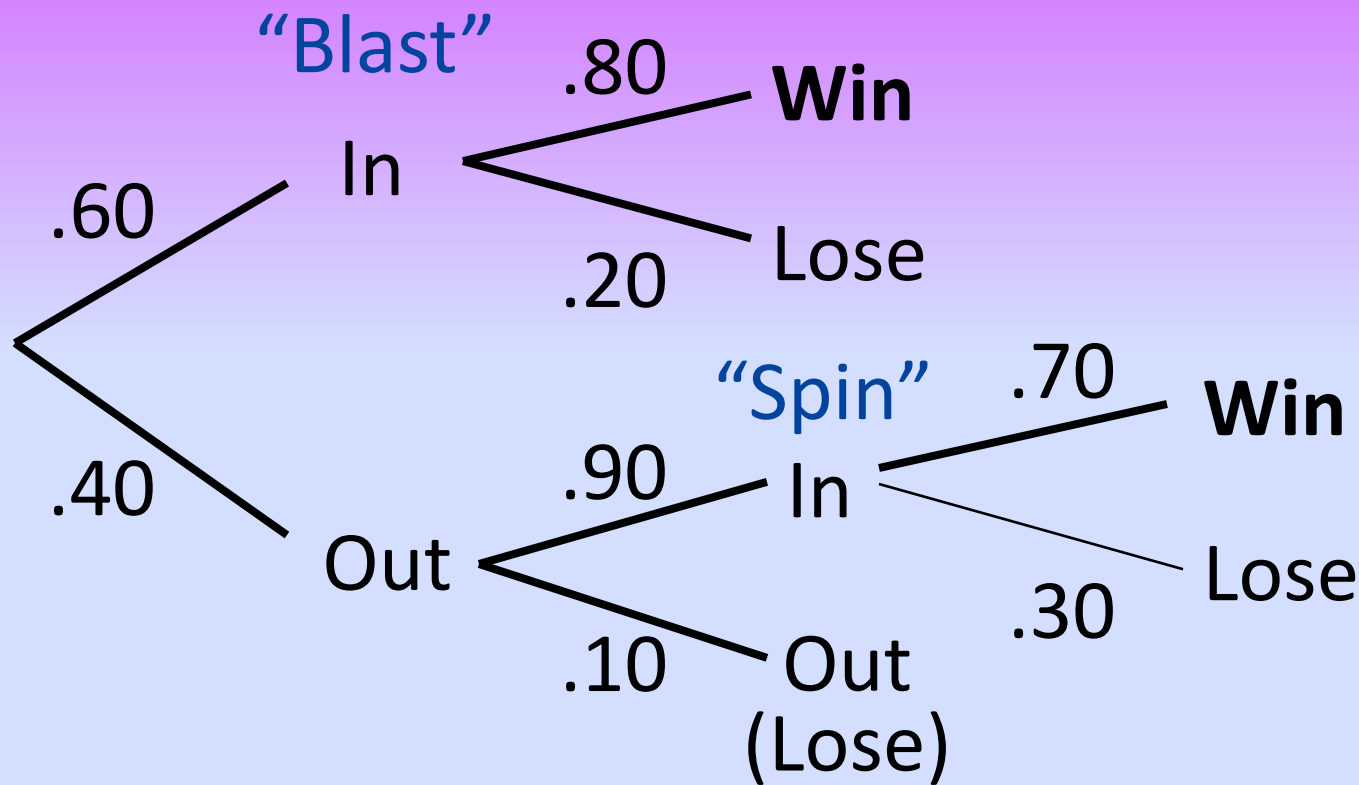
$Pr(win) = (.60)(.80)+(.40)(.90)(.70) = .732.$

# Example: Tennis serves
## "Blast," "Spin" or "Gentle" serves

"Blast" .80 — **Win**
In
.20 Lose
.60

.40
Out "Blast" .80 **Win**
.60 In
.20 Lose
.40 Out
(Lose)
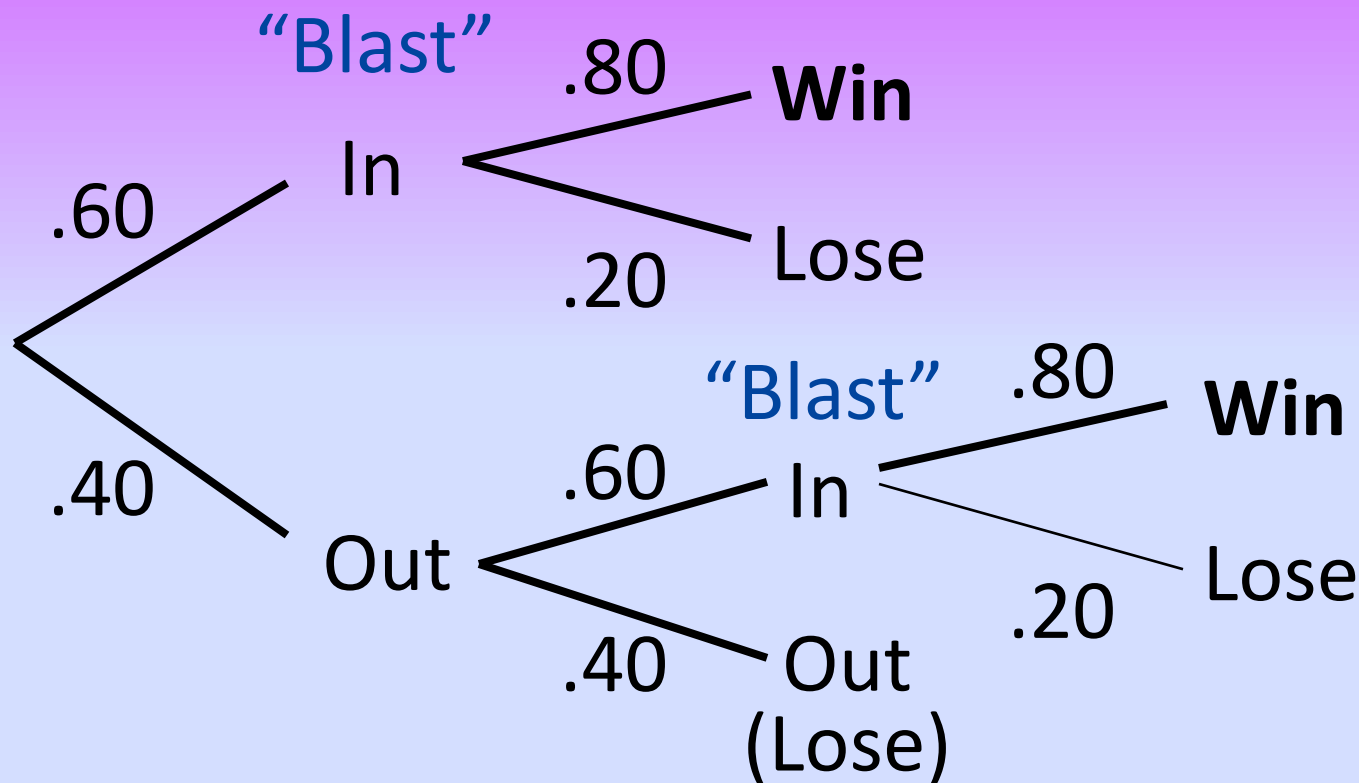
Pr(win) = (.60)(.80)+(.40)(.60)(.80) = .672.

# Example: Tennis serves
## "Blast," "Spin" or "Gentle" serves

| Serve combo | Prob. of winning point |
|---|---|
| B S | 0.732 |
| B G | 0.700 |
| S S | 0.693 |
| S G | 0.685 |
| S B | 0.678 |
| B B | 0.672 |
| G | 0.550 |