

**Option Comparison** In Exercises 11–14, compare the two options. (See Example 5.)

11.

	Probability	Gain
Option 1	100%	\$1000
	0%	\$0
Option 2	60%	\$2000
	40%	\$0

12.

	Probability	Gain
Option 1	100%	−\$1000
	0%	\$0
Option 2	70%	−\$2000
	30%	\$1000

13.

	Probability	Gain
Option 1	80%	\$1000
	20%	\$3000
Option 2	90%	\$2000
	10%	\$0

14.

	Probability	Gain
Option 1	75%	\$500
	25%	\$1500
Option 2	50%	−\$500
	50%	\$2000



**Investment Comparison** You want to invest \$1000. In Exercises 15 and 16, find the expected values for the two investments. (See Example 6.)

15.

Speculative investment	Conservative investment
<ul style="list-style-type: none"> <li>• Complete loss: 10% chance</li> <li>• No gain or loss: 20% chance</li> <li>• 150% gain: 40% chance</li> <li>• 200% gain: 20% chance</li> <li>• 700% gain: 10% chance</li> </ul>	<ul style="list-style-type: none"> <li>• Complete loss: 1% chance</li> <li>• No gain or loss: 39% chance</li> <li>• 50% gain: 40% chance</li> <li>• 100% gain: 20% chance</li> </ul>

16.

Speculative investment	Conservative investment
<ul style="list-style-type: none"> <li>• Complete loss: 30% chance</li> <li>• No gain or loss: 25% chance</li> <li>• 100% gain: 20% chance</li> <li>• 500% gain: 15% chance</li> <li>• 1000% gain: 10% chance</li> </ul>	<ul style="list-style-type: none"> <li>• Complete loss: 5% chance</li> <li>• No gain or loss: 15% chance</li> <li>• 30% gain: 60% chance</li> <li>• 60% gain: 20% chance</li> </ul>

