

Likelihood

Vocabulary event: any outcome that could happen from an experiment likelihood: chance of an event happening based on the event's probability									
Making Predictions page ____	We can use the probability of the event to determine the _____, or chance, of the event occurring.								
Think Like a Mathematician	When calculating probability, have you ever noticed how your answers look or how they are written? All probability answers fall within the range from ____ to ____. Probability is never less than _____ or greater than _____.								
Learn to Determine if the Probability is Possible	Determine if it is possible for each rational number to represent the probability of a chance event. Remember, probability should be from 0 to 1. <table><tr><td>0.26</td><td></td></tr><tr><td>1.01</td><td></td></tr><tr><td>$\frac{3}{5}$</td><td></td></tr><tr><td>-1.76</td><td></td></tr></table>	0.26		1.01		$\frac{3}{5}$		-1.76	
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Interpreting a Chance Event	<p>What does a likelihood of 0 mean? Give an example.</p> <p>What does a likelihood of 1 mean? Give an example.</p> <div><div><div></div><div>0</div></div><div><div></div><div>0.5 or $\left(\frac{1}{2}\right)$</div></div><div><div></div><div>1</div></div></div> <div>0% probability Equally likely and unlikely 50% probability 100% probability</div> <p>Describe the following events:</p> <p>50% probability –</p> <p>If the probability is closer to 0 –</p> <p>If the probability is closer to 1 –</p>								

Please use a separate sheet of paper to complete your practice problems.	
Comparing Probabilities page ____	<p>There are 15 gift card tickets, 3 headphones tickets, and 1 bicycle ticket that can be pulled from a box.</p> <p>What is the likelihood that a headphones ticket will be pulled? What is the likelihood that a gift card ticket will be pulled?</p> <p>First, calculate the probabilities of each event.</p> <p>$P(\text{headphones}) =$</p> <p>$P(\text{gift card}) =$</p> <p>Using these probabilities, compare the events. Write a few statements that can be made in comparing the likelihood of pulling a ticket for a gift card, headphones, or bicycle.</p>
Real-World Connection	<p>Missy has 2 pieces of gum in her pocket. One is strawberry flavored, and the other is grape flavored. She randomly pulls out one piece. What is the likelihood of her pulling out the grape piece of gum in comparison to the strawberry piece?</p>
Real-World Connection	<p>The science club had drinks and snacks at their monthly meeting. Joshua poured 40 cups of drinks and set them out on the table. There were 27 cups of fruit punch and 13 cups of lemonade. If randomly selected, compare the likelihood of picking a cup of lemonade to picking a cup of fruit punch.</p>
Real-World Connection	<p>The soccer team wants to purchase new uniforms. The coach took a survey on what color the players wanted for the new uniforms. The table in the course shows how many students chose each color.</p> <p>Compare the probability that a randomly selected player chose white, in comparison to one of the other colors, to determine the likelihood of choosing a white uniform.</p>

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