

MathFLIX CHALLENGE

Mathematical Modeling: Part to Part

On the way home from Six Flags Great America (GA). Anna, Ari, Lou, Amy, Jack, Lila, Emma, Sam, Pat, Ian and Al compared their day at the park.

Use mathematical modeling as well as algebra to solve each problem.

Problem	Model	Algebra	Solution					
<p>Anna went on one more ride than Ari. Together they went on 11 rides. How many rides did each go on?</p>	<p>Anna <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 40px; height: 20px;"></td><td style="width: 20px; height: 20px; text-align: center;">1</td></tr></table> } 11</p> <p>Ari <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 40px; height: 20px;"></td></tr></table></p>		1		<p>Ari $1x$</p> <p>Anna $1x + 1$</p> <hr style="width: 50%; margin-left: 0;"/> <p style="text-align: center;">11</p> <p>$2x + 1 = 11$</p>	<p>Anna _____</p> <p>Ari _____</p>		
	1							
<p>Lou went on 5 more rides than Amy. Together they went on 21 rides. How many rides did each go on?</p>	<p>Lou <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 40px; height: 20px;"></td><td style="width: 20px; height: 20px; text-align: center;">5</td></tr></table> } 21</p> <p>Amy <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 40px; height: 20px;"></td></tr></table></p>		5		<p>Amy $1x$</p> <p>Lou $1x + 5$</p> <hr style="width: 50%; margin-left: 0;"/> <p style="text-align: center;">21</p> <p>$2x + 5 = 21$</p>	<p>Lou _____</p> <p>Amy _____</p>		
	5							
<p>Sam went on 5 fewer rides than Pat. Together they went on a total of 45 rides. How many rides did each go on?</p>								
<p>Jack went on one more ride than Lila and she went on one more ride than Ian. Together the 3 went on a total of 21 rides. How many rides did each go on?</p>	<p>Ian <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 40px; height: 20px;"></td></tr></table></p> <p>Lila <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 40px; height: 20px;"></td><td style="width: 20px; height: 20px; text-align: center;">1</td></tr></table> } 21</p> <p>Jack <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 40px; height: 20px;"></td><td style="width: 20px; height: 20px; text-align: center;">1</td></tr></table></p>			1		1		
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<p>Amy, Jack, and Lila played a total of 20 games. Jack played 4 more games than Amy. Lila played 2 more games than Jack. How many games did each play?</p>								
<p>Amy, Jack, Pat and Lila won a total of 30 prizes. Jack won 1 more prize than Amy. Pat won 1 more prize than Jack. Lila won 1 more prize than Pat. How many prizes did each win.</p>								
<p>Amy, Jack, and Lila waited in lines for a total of 630 minutes. Jack waited 10 more minutes than Amy. Lila waited 10 minutes less than Amy. How many minutes did each wait in line?</p>								