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Summer Bridges: Incoming Algebra I Choice Board

This summer, your child can continue building a strong foundation in mathematics by completing a Math Choice Board. He or she will also have the opportunity to earn 10 extra credit points on the first math test of the 2026-2027 school year.

All completed choice board activities are due to your child's math teacher on Thursday, September 10, 2026.

Directions: Complete any **three** boxes **in a row** (horizontally, vertically, or diagonally).
Be sure to keep all of your work to hand in to your new math teacher in September.

<p style="text-align: center;">Beach Ball Geometry</p> <p>Find a spherical object (like a ball or a grapefruit). Measure its circumference using a piece of string and a ruler. Use the circumference to calculate its volume, showing all steps.</p>	<p style="text-align: center;">Summer Days Equations</p> <p>There are 92 days of summer. Create 5 multi-step equations (using positive/negative fractions or decimals) where $x = 92$. At least two must have variables on both sides!</p>	<p style="text-align: center;">A Firework's Path</p> <p>A firework is launched from the ground. It travels 63 feet straight up and 16 feet horizontally before exploding. Use the Pythagorean Theorem to find the diagonal distance of its flight path. Draw and label the right triangle.</p>
<p style="text-align: center;">The Snack Stand Showdown</p> <p>You are buying hot dogs for a BBQ. Stand A charges \$3.00 per hot dog. Stand B charges a one-time "membership fee" of \$4.00, but then hot dogs are only \$1.00 each. Write a system of equations to represent the cost (y) for x hot dogs at both stands. Graph both lines. At how many hot dogs is the cost exactly the same? Circle this solution on your graph and show the math to prove it!</p>	<p style="text-align: center;">Summer Flip, Slide, and Turn</p> <p>Draw a beach ball on a coordinate plane with a center at (3,1) and a radius of 2. Then complete the following transformations:</p> <p>Translation $(x, y) \rightarrow (x - 4, y + 2)$ Reflect across the x-axis. Rotate 270° clockwise.</p> <p>Label each transformed image with the correct math vocabulary term.</p>	<p style="text-align: center;">Summer Heat Hypothesis</p> <p>Do people actually stay inside more when it's hotter? For 10 days, record the high temperature and whether you spent the afternoon indoors or outdoors. Create a two-way table with "Temperature" (less than 85°F vs. 85°F or higher) as your rows and "Location" as your columns. Based on your data, calculate the relative frequency. Does a high temperature "cause" people to stay inside?</p>
<p style="text-align: center;">Cooler Capacity Challenge</p> <p>A rectangular cooler is 12 inches long, 8 inches wide, and 10 inches tall. Calculate the volume of the cooler. Then determine whether 2 smaller boxes measuring 6 inches by 4 inches by 5 inches would fit inside the cooler if placed side by side.</p>	<p style="text-align: center;">Lemonade Stand</p> <p>You are selling lemonade! Your "Start-up Cost" is \$5.00 (for ingredients). You sell each cup for \$0.50. Write a linear function in the form $f(x) = mx + b$ to represent your profit. Create a table showing your profit for 0 to 20 cups.</p>	<p style="text-align: center;">Irrational Ice Cream</p> <p>You are designing a circular ice cream sign with an area of 50 in^2. Use the formula $A = \pi r^2$ to find the radius of the sign. Leave your answer as a simplified square root, then estimate the radius to the nearest tenth.</p>