Mathkind

COMPARING FRACTIONS

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Your curling club has a match with your big rivals in the next town over. When it's your turn, you throw a great first rock. It lands solidly in the first ring, outside the button. To this point, the best throw was by your opponents, whose rock is in the exact middle of the first ring, halfway between the button and the second ring.

1. Below are a list of throws that describe the fraction of a ring it is from the edge of the button. Therefore, the current best throw is half a circle from the button. Determine which of the totals below would be better than your opponent's. Which ones would not even be in the first circle? In other words, is the fraction between the intervals 0 and ½, ½ and 1, or 1 and 1½?

$\frac{3}{5}$ $\frac{1}{5}$ $\frac{7}{9}$ $\frac{3}{10}$ $\frac{7}{5}$ $\frac{4}{7}$ $\frac{3}{8}$ $\frac{5}{6}$ $\frac{1}{3}$

$\frac{7}{10}$ $\frac{4}{5}$ $\frac{2}{9}$ $\frac{3}{7}$ $\frac{8}{5}$ $\frac{2}{3}$ $\frac{12}{11}$ $\frac{6}{13}$ $\frac{4}{9}$

2. For each of the above fractions, decide whether it is closer to: (1) the button, (2) my opponent's rock, (3) the second circle, or (4) halfway through the second circle. In other words, is the above fraction closer to ½, 1, or 1½? How do you know your answer is correct?

3. In another round, you had one of the two closest throws. Your throw was ⅝ of a circle from the button and your opponent's throw was ⅜ of a circle from the button. Whose throw was better? Compare the following distances with a *greater than* (<), *less than* (>), or *equal to* symbol (=). Explain how you chose which symbol to use.

$\frac{2}{3}$ ——— $\frac{3}{9}$ $\frac{5}{6}$ ——— $\frac{5}{9}$ $\frac{4}{7}$ ——— $\frac{4}{9}$ $\frac{7}{8}$ ——— $\frac{8}{9}$

$\frac{11}{10}$ ——— $\frac{9}{8}$ $\frac{3}{5}$ ——— $\frac{6}{10}$ $\frac{3}{5}$ ——— $\frac{3}{6}$ $\frac{1}{4}$ ——— $\frac{4}{12}$

4. All four members of your team tossed their stone into the first circle. The following fractions are the distance their stone is between the first and second circles. So, ¾ means the stone is ¾ of the way between the first and second circle. Place your team's throws in order from least to greatest. Which throw is closest to the button?

a. $\frac{2}{3}, \frac{7}{9}, \frac{3}{4}, \frac{3}{7}$ b. $\frac{3}{5}, \frac{3}{8}, \frac{1}{2}, \frac{5}{6}$

5. Your two teammates have tossed their stones in the button. One teammate threw her stone ⅕ of the way between the center and the first circle and the other threw his stone ⅖ of the way between the center and the first circle. How far can my stone be from the center if you want its distance to be between your teammates? Find a fraction between each of the following pairs of fractions. Describe how you chose each fraction.

a. $\frac{1}{5}$ and $\frac{2}{5}$ b. $\frac{3}{10}$ and $\frac{7}{10}$ c. $\frac{5}{8}$ and $\frac{5}{9}$ d. $\frac{1}{3}$ and $\frac{1}{6}$

6. You're throwing the final two stones for your team and need to place them BOTH between your teammates. Find two fractions between each pair of fractions. Describe two strategies to find these fractions.

a. $\frac{3}{7}$ and $\frac{4}{7}$ b. $\frac{5}{13}$ and $\frac{6}{13}$