Exploring sporty rational numbers: ski times

Name:

Class:

The **time differences** based on the results of ten competitor skiers are recorded on the cards on the next page. Unfortunately, a blizzard has caused computational and mobile data system failure, so the order that each skier finished the race is uncertain.

It has been a while since the judges have been to high school and it seems they were a bit too reliant on technology. As you can see below, all three judges have placed the competitors incorrectly.

Judge 1 – B, H, G, A, F, I, D, E, J, C

Judge 2 – H, G, E, C, D, J, B, A, F, I

Judge 3 – C, E, B, G, I, J, H, F, A, D

Problem

Write the correct order in the solution box at the bottom of the page so the three judges can check their work and finalise the result. But before you do, try planning and thinking about how you will sort the skiers correctly.

Planning and questioning

Consider the following questions and prompts. The questions will help you think about different strategies to finish the task. Cut the results into cards if it makes life easier! Use the Thought box to record your ideas.

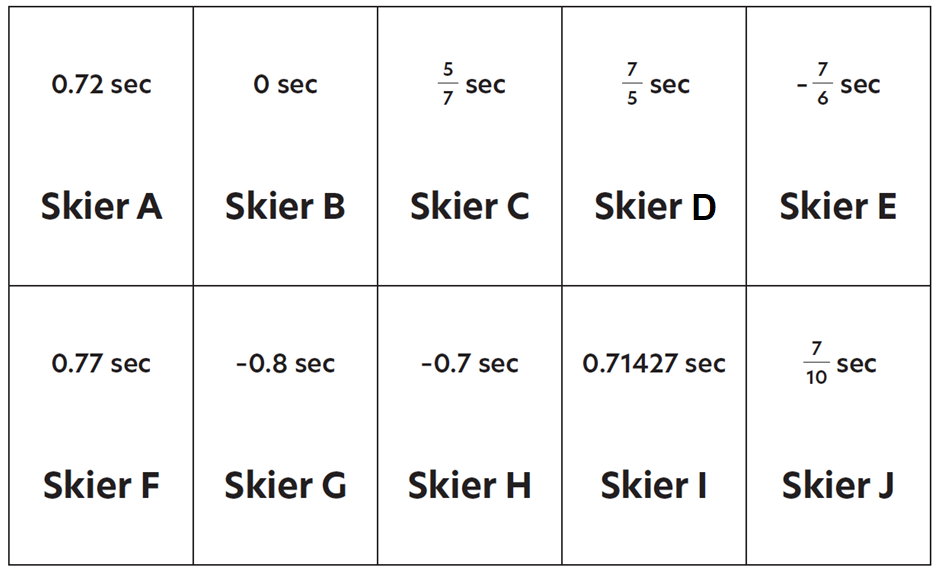
1. Think about what makes sense to you? Is sorting the cards into groups a good idea? How will group them? What strategies will you use to make them one ordered group?
2. Should you sort the cards from fastest to slowest, or the other way round?
3. Draw a number line and place all ten numbers correctly labelling each place marking.
4. Question why the judges ordered their results differently. Identify and describe them to your friend or teacher.

Thought box

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Solution

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