Estimating Instantaneous rate of change: Rowing Investigation Activity

Below is a distance time graph for the first ten seconds of Ireland's winning row in Lightweight Men's Double Sculls at the 2022 World Rowing Championships:



1. Using your graph or otherwise find what Ireland's average speed was over these 10 seconds?

2. Ireland's coach wants to know what their speed is at exactly 6 seconds. To help answer this fill in the following table.

| Average speed between A and B | Average speed between A and G |
|-------------------------------|---------------------------------|
| = | = |
| Average speed between A and C | Average speed between A and H |
| = | = |
| Average speed between A and D | Average speed between A and I = |
| = | |
| Average speed between A and E | Average speed between A and J |
| = | = |

3. The slope of which secant is the nearest estimate to Ireland's speed after exactly 6 seconds?

4. How might you find a better estimate for Ireland's speed at 6 seconds?