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Quarterly Problem

- Science Edition -

Winter is coming!



Snowy white winter is a beautiful season. A sunny winter day, when the outdoor temperature is a little below zero, attracts to outdoor winter sports. Which one do you choose? Do you like to slide down the slopes on skis or snowboards? Do you prefer more demanding cross-country skiing, or are you just a couch-potato?

The ski resort has different types of lifts: cable cars, seat lifts and ski lifts. Have you thought about which ones are slowest or fastest and why? How would you calculate the average speed of a ski lift? Describe which input data is needed to calculate the speed.

The ideal ski resort represents almost no waiting for the transport to the top of the slope. Some families have recently been refused to buy their ski tickets because the ski resort's capacity has been exhausted for that day. What does it mean? How to calculate the capacity of a downhill skiing resort? Is it related to the capacity of lifts? And what other attributes should be taken into account when determining the capacity of a ski resort?

Brainstorm-Box

Check out maps from famous ski resorts, for example in the Alps. Sometimes the maps contain more information, if you look closely!

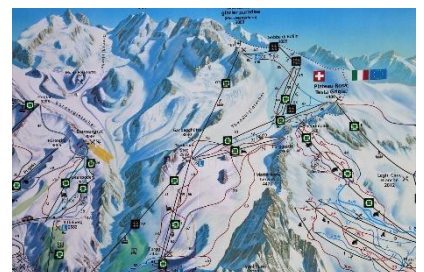


Image by  Julita  on Pixabay

Whose method is the most accurate?

Focus on phrasing your approach in a clear and comprehensible way. Also state what foundation you have used for your estimations.