8.1 TB or Not TB?

A Develop Understanding Task



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Tuberculosis (TB) can be tested in a variety of ways, including a skin test. If a person has turberculosis antibodies, then they are considered to have TB. Below is a tree diagram representing data based on 1,000 people who have been given a skin test for turberculosis.

784+ Test 361 ha518 Tested positive | TB 361 Not 228 620 TB 1000 Tested negative/TB 19 Patient has TB 380 Tested Positive | not TB Patient does NOT have TB 620 LAVETB 361 MIETB and tested + Tested negative | not TB 558 558 Doport TBank total Sample Space 1. What observations do you notice about TB tests based on the tree diagram? False positives are more likely than false negatives.
More than 13 of the population has T.B.

2. You may have noticed that 380 patients have TB, yet not all 380 patients with TB tested positive. In statistics, the notation: "Tested negative | TB" means 'the number of patients who tested negative, given that they have TB'. Determine the probability that a person who has TB could receive a negative result compared to others who have TB. What does this mean?

Probability that someone tests
Agative GIVEN they have TB 26/0

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