

Turkey Junior National Olympiad 1997

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by xeroxia

- 1 Solve the equation $\sqrt{a - \sqrt{a + x}} = x$ in real numbers in terms of the real number $a > 1$.

- 2 Let ABC be a triangle with $|AB| = |AC| = 26$, $|BC| = 20$. The altitudes of $\triangle ABC$ from A and B cut the opposite sides at D and E , respectively. Calculate the radius of the circle passing through D and tangent to AC at E .

- 3 1 or -1 is written in 50 letters. These letters are put into 50 envelopes. If you ask, you can learn the product of numbers written into any three letters. At least, how many questions are required to find the product of all of the 50 numbers?
