

Answer on Question #81748 – Math – Algebra

Question

A pharmacist needs to make 20 cc of a 0.05% steroid solution to treat allergic rhinitis. How much of a 0.08% solution and a 0.03% solution should be used?

Solution

X-number of cubic centimeters 0.08% solution

20-X-number of cubic centimeters 0.03% solution

$$0.08 * X + 0.03 * (20 - X) = 0.05 * 20$$

$$0.08 * X + 0.6 - 0.03 * X = 1$$

$$0.05 * X = 0.4$$

$$X = 0.4 / 0.05$$

$$X = 8$$

$$20 - X = 20 - 8 = 12$$

Answer: 12 cc 0.03% solution; 8 cc 0.08% solution.