

6. The weight of an object varies inversely as the square of its distance from the center of the earth. If an object 8,000 miles from the center of the earth weighs 90 pounds, find its weight when it is 12,000 miles from the center of the earth.

7. A 60% alcohol solution is to be mixed with a 42% alcohol solution. How many liters of the 60% solution should be used to make 30 liters of a 54% solution?

8. Find all solutions to $\sqrt{t+1} = t-1$

9. Find the equation of the line that goes through the point $(-3,2)$ and is perpendicular to the line $2x - y = 5$.

10. Doris has a fish pond that is 15 ft by 18 ft. She wants to put grass in a strip of uniform width around the pond. She has enough grass seed for 234 sq ft. How wide should she make the strip?