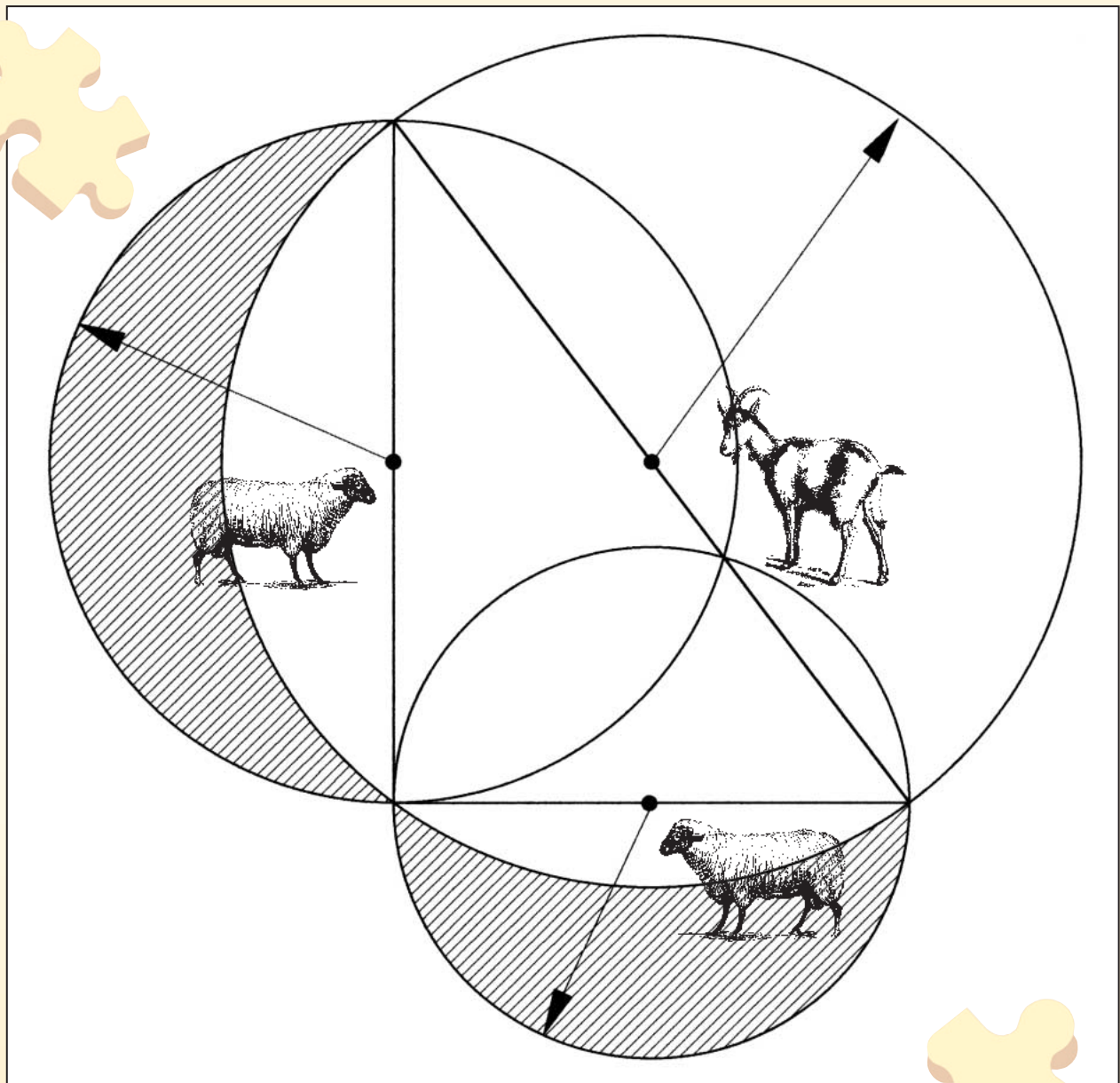




Put your thinking caps on! This month's challenges require you to determine areas for several given situations.

Problem 53

A triangular field with sides in the ratio 3:4:5 has a goat tethered to the midpoint of the hypotenuse and a sheep tethered to the midpoint of each side. Each animal can reach as far as the vertex of its side of the triangle. If the area of the field is one acre, what is the area the sheep can reach (the shaded area in the drawing) that the goat cannot reach?



Problem 54

What is the area exclusive to each animal?