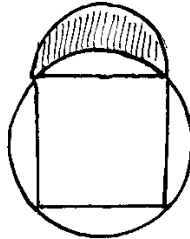


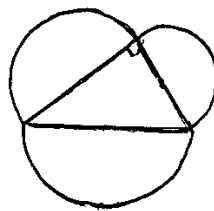
- 1 The diagram shows a square with sides length 1 unit together with its circumscribing circle. A semicircle is drawn having as its diameter one of the sides of the square. Show that the area of the shaded lune is  $\frac{1}{4}$  square units.



- 2 Each of the sides of a right-angled triangle has a semicircle drawn as shown with the side as its diameter.

Conjecture the “rounded” equivalent of Pythagoras’ Theorem in terms of areas of semicircles drawn on the sides as diameters.

Use Pythagoras’ Theorem to prove or disprove your conjecture,



- 3 For the given figure, show that the shaded area is 3 square units.

