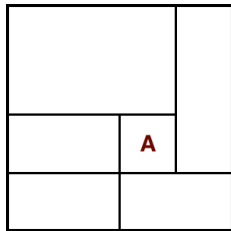## Question 3

Consider the large square on the right, which contains shapes of four different sizes.

(a) (i) Without measuring, explain what fraction of the large square is represented by the smallest shape labelled A.

   (ii) Label the next smallest shape with B.
        What fraction of the large square is represented by B? Explain your reasoning.

   (ii) Label the next smallest shape with C. What fraction of the large square is represented by C? Explain your reasoning.

   (iii) Label the remaining shape with D. What fraction of the large square is represented by D? Explain your reasoning.

(b) Shade exactly half of the large square. (Show this in your assignment.)
    Explain how you know that this is exactly one half.

(c) There are twelve different fractions that can be represented using two or more of the smaller shapes. Explain how to find four of the fractions by making reference to A, B, C and D.

(d) If the entire area of the large square is 12 units^2, what is the area of D?

(e) If the area of C is 4 units^2, what is the area of the large square?