1. This is a regular hexagon; each side has length one unit.
   a) What are the angles?

   ![Hexagon]

   b) What is the height?
c) What is the area of the hexagon?

d) Can you tile the plane with regular hexagons?
2. a) What are the angles in a regular pentagon?

b) Fill in all the angles in this pentagram.
3. a) Can you find an equation for \( x \) by using similar triangles?

![](image)

b) Rewrite the equation as a quadratic equation in \( x \).

c) The number \( x \) is called the golden mean. Find it by completing the square in the equation above, that is finding numbers \( c \) and \( d \) so that the equation becomes

\[(x-c)^2 = d.\]
4. Find the area of the pentagon.

5. Can pentagons tile the plane?