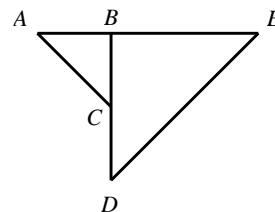


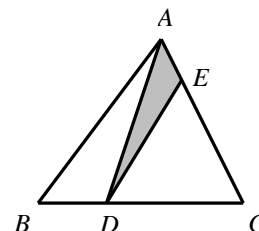
Geometry Part 1

Equal height model

1. As shown in the figure, the area of triangle ABC is 1, where $AE = 3AB$, $BD = 2BC$, what is the area of triangle BDE ?

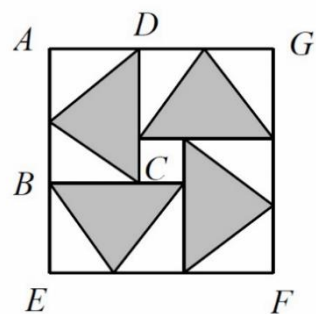


2. As shown in the figure, $DC = 2BD$, $CE = 3AE$, the area of triangle ADE is 20. What is the area of triangle ABC ?

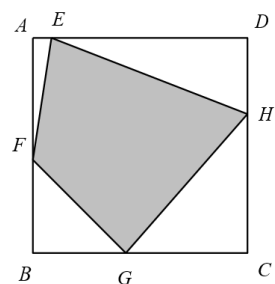


Half model

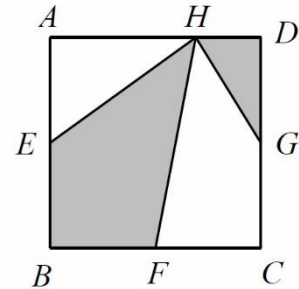
1. As shown in the figure, the length of the small rectangle $ABCD$ is 2 cm more than the width. Four identical small rectangles are used to form a large square $AEFG$. It is known that the area of the large square is 70 square centimetres. Find the area of the shadow in the figure.



2. As shown in the figure, $AF = 7\text{ cm}$, $DH = 4\text{ cm}$, $BG = 5\text{ cm}$, $AE = 1\text{ cm}$. If the area of the quadrilateral $EFGH$ in the square $ABCD$ is 78 cm^2 , find the side length of the square.

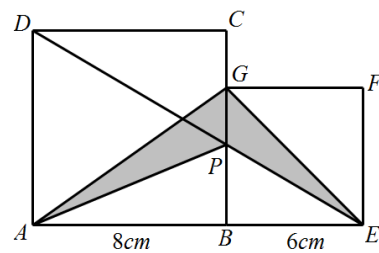


3. As shown in the figure, the area of the square $ABCD$ is 56 square centimetres, points E , F , and G are the midpoint on the side of the square $ABCD$, and H is any point on the side of AD . Given that the area of the triangle HDG is 9 square centimetres, calculate the area of the quadrilateral $HEBF$.

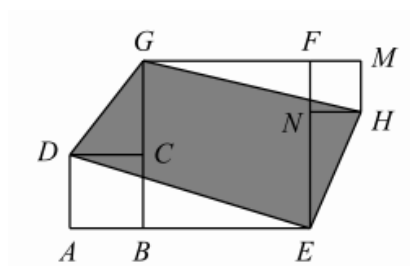


Equal area with different shapes

1. As shown in the figure, square $ABCD$ and square $BEFG$ are arranged side by side. DE and BG intersect at P , what is the area of the shaded part in the figure?



2. Three squares are placed as shown in the figure, $AB=9$, $BE=21$, $FM=6$. Find the area of shaded quadrangle.



3. As shown in the figure, the vertices D , G and K of the three squares are exactly on the same line. The side length of the square $GFEB$ is 10 cm. Find the area of the shaded part.

