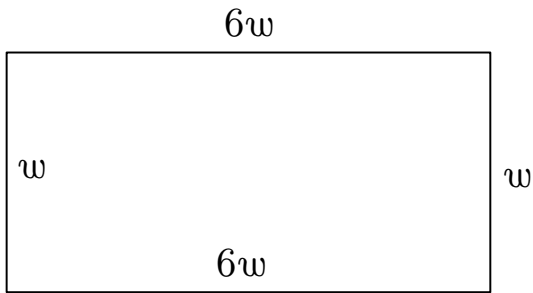


A rectangle length is six times its width. Let  $w$  denote the width of the rectangle. Write a polynomial to represent the perimeter of the rectangle.

1) Draw a rectangle, and label the sides so the problem will seem more concrete.

1a) Label the vertical sides  $w$ .

1b) The phrase length is six times the width means  $L=6w$ . So label the horizontal sides  $6w$ .



2) Now go around the shape, and add the terms to get the whole perimeter.

$$\text{Perimeter} = w + 6w + w + 6w = 14w$$

Note: Don't forget that  $w$  really means  $1w$ , so that we have  $1w + 6w + 1w + 6w = 14w$