Example Rectangle Problem with Work Provided.

The length of a rectangle is 6 inches more than twice the width. If the perimeter of the rectangle is 102 inches, find the length and width. Then find the area of this rectangle.

We are given a rectangle with a perimeter of 102 inches. Let *w* represent the width of the rectangle. Since the length is 6 inches more than twice the width, the length can be represented as 2*w* 6. Since the perimeter is 102 inches, we have the equation:

w + w + 2w + 6 + 2w + 6 = 102

Solving Equation:

Simplify 1st: 6w + 12 = 102

Isolate 2nd: 6w = 102 -12

 6W = 90 / 6

 w = 15

Now Substitute the answer into the expressions:

 width: w = 15

 length: 2w + 6 2(15) + 6 = 36

Area = Length x width

Area = 36 x 15 Area is 540.