6.EE Rectangle Perimeter 3

Task

Sadie computes the perimeter of a rectangle by adding the length, l, and width, w, and doubling this sum. Eric computes the perimeter of a rectangle by doubling the length, l, doubling the width, w, and adding the doubled amounts.

a. Write an expression for Sadie's way of calculating the perimeter. Write an expression for Eric's way as well.

b. Use both of the expressions to find the perimeter of a rectangle with length 30 and width 75.

c. Explain why Sadie and Eric always get the same answer, no matter what the length and width of the rectangle are.