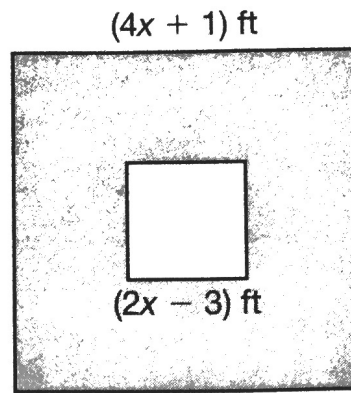


19. The following diagram shows a small unshaded square inside a large shaded square. Students in Ms. Galileo's algebra class must express the area of the large square's shaded region as a polynomial.



- A. Julio used the following steps to express the area of the shaded region as a polynomial:

Step 1: Area (shaded region) = Area (large square) - Area (small square)

Step 2: $= (4x + 1)^2$ square feet - $(2x - 3)^2$ square feet

Step 3: $= (2x + 4)^2$ square feet

Step 4: $= (2x + 4)(2x + 4)$ square feet

Step 5: $= 4x^2 + 8x + 8x + 16$ square feet

Step 6: $= 4x^2 + 16x + 16$ square feet

Step 7: $= 4(x^2 + 4x + 4)$ square feet

Find the mistake in Julio's work. Explain why this step is incorrect.

- B. Help Julio find the following, in terms of x .

The area of the large square: _____ square feet

The area of the small square: _____ square feet

The area of the shaded region: _____ square feet