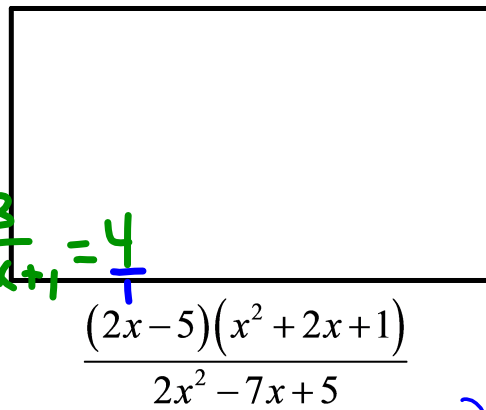Determine the value of x in the diagram below, given that the area of the rectangle is 4 dm^2

$A = 4$

$L \times W = 4$

$$\frac{(2x-5)(x^2+2x+1)}{2x^2-7x+5} \cdot \frac{3}{x+1} = 4$$

$$\frac{3}{x+1}$$　　ω

$$\frac{(2x-5)(x^2+2x+1)}{2x^2-7x+5}$$

$m+n = -7$
$m \cdot n = 10$

$2x^2 - 7x + 5$

$2x^2 - 2x - 5x + 5$

$$\frac{(2x-5)(x+1)(x+1)}{(x-1)(2x-5)} \cdot \frac{3}{x+1} = 4 \quad , \quad x \neq \{-1, 1, 2.5\}$$

$2x(x-1) - 5(x-1)$

$$\frac{(2x-5)(x+1)(x+1) \cdot 3}{(x-1)(2x-5)(x+1)} = 4 \Rightarrow \boxed{\frac{3x+3}{x-1} = \frac{4}{1}}$$

$2x - 5 = 0$
$2x = 5$
$x = \frac{5}{2}$
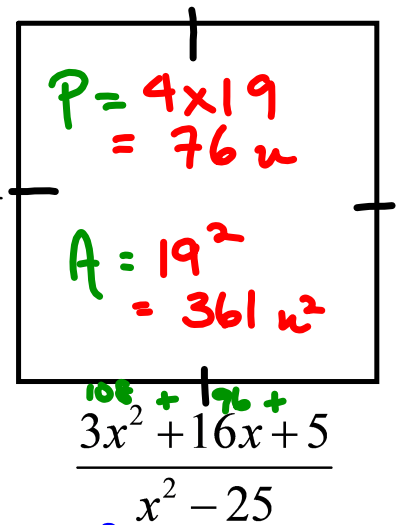
$$\frac{3x+3}{x-1} = \frac{4}{1}$$

$$4x - 4 = 3x + 3$$
$$-3x \qquad\qquad -3x$$

$$x - 4 = 3$$
$$+4 \qquad +4$$

$$\boxed{x = 7}$$

$$x \neq \{-1, 1, 2.5\}$$

Find the <u>numerical value</u> for

the perimeter and the area $\boxed{19} = \frac{38}{2} = \dfrac{3x+20}{x-4}$

of this <u>square</u>.

$$\dfrac{3x+20}{x-4} = \dfrac{3x^2+16x+5}{x^2-25}$$

$$\dfrac{3x+20}{x-4} = \dfrac{(3x+1)(x+5)}{(x-5)(x+5)}$$

$\Rightarrow x \neq \{-5, 4, 5\}$

$$\dfrac{3x+20}{x-4} = \dfrac{3x+1}{x-5}$$

$$(3x+20)(x-5) = (x-4)(3x+1)$$

$P = 4 \times 19$
$= 76\ u$

$A = 19^2$
$= 361\ u^2$

$\dfrac{3x^2+16x+5}{x^2-25}$

$\dfrac{209}{11} = 19$

$3x^2 + 5x - 100 = 3x^2 - 11x - 4$

$16x - 100 = -4$

$16x = 96$

$x = 6$