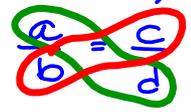


Example: Solve for m .

fraction = fraction



$a \cdot d = b \cdot c$

check

$$\frac{5}{3} - \frac{7}{8} = \frac{19}{24}$$

$$\frac{40}{24} - \frac{21}{24} = \frac{19}{24}$$

$$\frac{19}{24} \cdot \frac{19}{24}$$

$$\frac{m-1}{3} - \frac{m+1}{8} = \frac{3m+1}{24}$$

$$\frac{(8)(m-1)}{8 \cdot 3} - \frac{(m+1)(3)}{8 \cdot 3} = \frac{3m+1}{24}$$

$$\frac{(8m-8) - (3m+3)}{24} = \frac{3m+1}{24}$$

$$5m-11 = 3m+1$$

$$\begin{array}{r} -3m \quad -3m \\ 2m - 11 = 1 \\ +11 \quad +11 \end{array}$$

$$2m = 12$$

$$\frac{2m}{2} = \frac{12}{2}$$

$$\Rightarrow \boxed{m=6}$$

$$\frac{5m-11}{24} = \frac{3m+1}{24}$$

Denominators are equal
 \therefore Numerators are equal

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

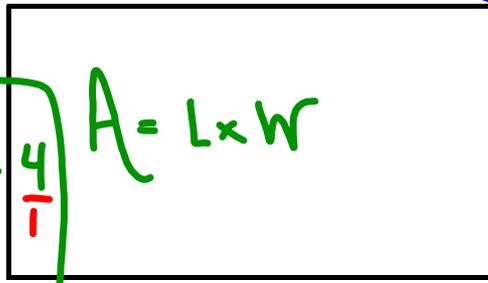
$A = 4$

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

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

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

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



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

$2x^2 - 7x + 5$
 $10 = mn \rightarrow -2, -5$
 $-7 = m+n$
 $2x^2 - 2x - 5x + 5$
 $\frac{3}{x+1} \frac{2x(x-1) - 5(x-1)}{(x-1)(2x-5)}$

$2x - 5 = 0$
 $2x = 5$
 $\div 2$
 $x = 2.5 = \frac{5}{2}$

$$\frac{3x+3}{x-1} = \frac{4}{1}$$
$$\begin{array}{r} 3x+3 = 4x-4 \\ -3x \quad -3x \\ \hline 3 = x-4 \\ +4 \quad +4 \\ \hline 7 = x \end{array}$$

Look

$$x \neq \{-1, 1, 2.5\}$$
$$\therefore x = 7$$

Find the numerical value for # the perimeter and the area of this square.

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

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

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

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

$$\frac{3x+20}{x-4}$$

$$= \frac{18+20}{2} = \frac{38}{2} = \underline{19}$$

(20)
108 + 96 + 5
3(36) + 4(6) + 5

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

$$\frac{3x^2+16x+5}{x^2-25} = 11$$

$\Delta 15 = m \times n$
 $16 = m + n$ $\rightarrow 15, 1$

$$3x^2 + x + 15x + 5$$

$$x(3x+1) + 5(3x+1)$$

$$\frac{3x+20}{x-4} \cdot \frac{3x+1}{x-5}$$

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

$$\begin{array}{r} 3x^2 + 5x - 100 \\ -3x^2 + 11x \end{array} = \begin{array}{r} 3x^2 - 11x - 4 \\ -3x^2 + 11x \end{array}$$

$$\begin{array}{r} 16x - 100 = -4 \\ +100 \quad +100 \\ 16x = 96 \end{array}$$

$$\frac{16x}{16} = \frac{96}{16}$$

$$x = 6$$

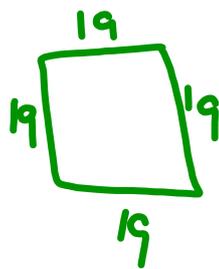
$$\frac{3x+20}{x-4}$$

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

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

Answer

$$\begin{array}{l} P = 4 \times 19 \\ = 76 \text{ u} \\ A = 19^2 \\ = 361 \text{ u}^2 \end{array}$$



The perimeter of the right triangle below is $2a + 5$. Find the length of the missing side.

$$\frac{a^2 - 15a + 24}{a - 6}$$

$$\frac{a^2 - 6}{a - 6}$$

$$?$$

$2 \cdot 18 = 36 = m \cdot n$
 $-15 = m + n$
 $-12, 3$
 $2a^2 - 12a - 3a + 18$
 $2a(a - 6) - 3(a - 6)$

$① + ② + ③ = 2a + 5$

$② + ③$
 $\frac{a^2 - 15a + 24}{a - 6} + \frac{a^2 - 6}{a - 6}$
 $\frac{2a^2 - 15a + 18}{a - 6}$

$? = \frac{2a + 5}{1} - \left(\frac{2a^2 - 15a + 18}{a - 6} \right)$ $a \neq \{6\}$

$? = \frac{2a + 5}{1} - \frac{(a - 6)(2a - 3)}{a - 6}$

$? = (2a + 5) - (2a - 3)$

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