

Đề bài

Giải các phương trình:

a) $\frac{5x-2}{3} = \frac{5-3x}{2};$

b) $\frac{10x+3}{12} = 1 + \frac{6+8x}{9}$

c) $\frac{7x-1}{6} + 2x = \frac{16-x}{5};$

d) $4(0,5 - 1,5x) = -\frac{5x-6}{3}$

Đáp án lời giải

a) $\frac{5x-2}{3} = \frac{5-3x}{2}$

$$\Leftrightarrow 2(5x - 2) = 3(5 - 3x)$$

$$\Leftrightarrow 10x - 4 = 15 - 9x$$

$$\Leftrightarrow 10x + 9x = 15 + 4$$

$$\Leftrightarrow 19x = 19$$

$$\Leftrightarrow x = 1$$

b) $\frac{10x+3}{12} = 1 + \frac{6+8x}{9} \Leftrightarrow \frac{3(10x+3)}{36} = \frac{36+4(6+8x)}{36}$

$$\Leftrightarrow 30x + 9 = 36 + 24 + 32x$$

$$\Leftrightarrow 30x - 32x = 60 - 9$$

$$\Leftrightarrow -2x = 51$$

$$\Leftrightarrow x = -51/2$$

$$\Leftrightarrow x = -25,5$$

c) $\frac{7x-1}{6} + 2x = \frac{16-x}{5}$

c) $\frac{7x-1+12x}{6} = \frac{16-x}{5}$

$$\Leftrightarrow 5(19x - 1) = 6(16 - x)$$

$$\Leftrightarrow 95x - 5 = 96 - 6x$$

$$\Leftrightarrow 95x + 6x = 96 + 5$$

$$\Leftrightarrow 101x = 101$$

$$\Leftrightarrow x = 1$$

$$d) 4(0,5 - 1,5x) = -\frac{5x-6}{3} \Leftrightarrow 2 - 6x = -\frac{5x-6}{3}$$

$$\Leftrightarrow 3(2 - 6x) = -(5x-6)$$

$$\Leftrightarrow 6 - 18x = -5x + 6$$

$$\Leftrightarrow -18x + 5x = 6-6$$

$$\Leftrightarrow -13x = 0$$

$$\Leftrightarrow x = 0$$

Vậy phương trình có nghiệm duy nhất $x = 0$.