

**BỒI DƯỠNG NĂNG LỰC TOÁN**  
**GIÁO VIÊN: NGUYỄN THÀNH LONG**  
**ĐÁP ÁN BÀI TẬP TỰ LUYỆN**

Tìm x trong biểu thức chứa phân số

[www.vinastudy.vn](http://www.vinastudy.vn)

**Bài 1:** Tìm X

a)  $\frac{17}{5} : x = \frac{34}{5} : \frac{4}{3}$

b)  $x : \frac{4}{5} = \frac{25}{8} : \frac{5}{4}$

**Bài giải**

a)  $\frac{17}{5} : x = \frac{34}{5} : \frac{4}{3}$

$$\frac{17}{5} : x = \frac{51}{10}$$

$$x = \frac{17}{5} : \frac{51}{10}$$

$$x = \frac{17}{5} \times \frac{10}{51}$$

$$x = \frac{2}{3}$$

b)  $x : \frac{4}{5} = \frac{25}{8} : \frac{5}{4}$

$$x : \frac{4}{5} = \frac{5}{2}$$

$$x = \frac{5}{2} \times \frac{4}{5}$$

$$x = 2$$

**Bài 2:** Tìm X

a)  $\left(x - \frac{1}{3}\right) \times \frac{5}{3} = \frac{14}{27} - \frac{3}{9}$

b)  $(12 \times 15 - x) \times \frac{1}{4} = 120 \times \frac{1}{4}$

**Bài giải**

a)  $\left(x - \frac{1}{3}\right) \times \frac{5}{3} = \frac{14}{27} - \frac{3}{9}$

$$\left(x - \frac{1}{3}\right) \times \frac{5}{3} = \frac{5}{27}$$

$$x - \frac{1}{3} = \frac{5}{27} : \frac{5}{3}$$

$$x - \frac{1}{3} = \frac{1}{9}$$

$$x = \frac{1}{9} + \frac{1}{3}$$

$$x = \frac{4}{9}$$

b)  $(12 \times 15 - x) \times \frac{1}{4} = 120 \times \frac{1}{4}$

$$(12 \times 15 - x) \times \frac{1}{4} = 30$$

$$(12 \times 15 - x) = 30 : \frac{1}{4}$$

$$(12 \times 15 - x) = 120$$

$$180 - x = 120$$

$$x = 180 - 120$$

$$x = 60$$

**Bài 3:** Tìm số X theo cách nhanh nhất

$$x \times \frac{2}{3} - \frac{2}{3} + \frac{3}{4} = \frac{9}{12}$$

**Bài giải**

$$x \times \frac{2}{3} - \frac{2}{3} + \frac{3}{4} = \frac{9}{12}$$

$$\frac{2}{3} \times (x - 1) = \frac{9}{12} - \frac{3}{4}$$

$$\frac{2}{3} \times (x - 1) = 0$$

$$x - 1 = 0$$

$$x = 1$$

**Bài 4:** Tìm X là số tự nhiên ?

$$X - \frac{20}{11 \times 13} - \frac{20}{13 \times 15} - \frac{20}{15 \times 17} - \dots - \frac{20}{53 \times 55} = \frac{3}{11}$$

**Bài giải**

$$X - \frac{20}{11 \times 13} - \frac{20}{13 \times 15} - \frac{20}{15 \times 17} - \dots - \frac{20}{53 \times 55} = \frac{3}{11}$$

$$X = \frac{3}{11} + \frac{20}{11 \times 13} + \frac{20}{13 \times 15} + \frac{20}{15 \times 17} + \dots + \frac{20}{53 \times 55}$$

$$X = \frac{3}{11} + 10x \left( \frac{2}{11 \times 13} + \frac{2}{13 \times 15} + \frac{2}{15 \times 17} + \dots + \frac{2}{53 \times 55} \right)$$

$$X = \frac{3}{11} + 10x \left( \frac{2}{11 \times 13} + \frac{2}{13 \times 15} + \frac{2}{15 \times 17} + \dots + \frac{2}{53 \times 55} \right)$$

$$X = \frac{3}{11} + 10x \left( \frac{1}{11} - \frac{1}{13} + \frac{1}{13} - \frac{1}{15} + \frac{1}{15} - \dots + \frac{1}{53} - \frac{1}{55} \right)$$

$$X = \frac{3}{11} + 10x \left( \frac{1}{11} - \frac{1}{55} \right)$$

$$X = \frac{3}{11} + \frac{8}{11}$$

$$X = 1$$

**Bài 5:** Tìm X là số tự nhiên.

$$\frac{1}{21} + \frac{1}{28} + \frac{1}{36} + \dots + \frac{2}{X(X+1)} = \frac{2}{9}$$

**Bài giải**

$$\frac{1}{21} + \frac{1}{28} + \frac{1}{36} + \dots + \frac{2}{X(X+1)} = \frac{2}{9}$$

Nhân cả tử và mẫu về trái với 2, ta được:

$$\frac{2}{42} + \frac{2}{56} + \frac{2}{72} + \dots + \frac{2}{X(X+1)} = \frac{2}{9}$$

$$2x \left( \frac{1}{42} + \frac{1}{56} + \frac{1}{72} + \dots + \frac{1}{X(X+1)} \right) = \frac{2}{9}$$

$$2x \left( \frac{1}{6} - \frac{1}{7} + \frac{1}{7} - \frac{1}{8} + \dots + \frac{1}{X} - \frac{1}{X+1} \right) = \frac{2}{9}$$

$$2x \left( \frac{1}{6} - \frac{1}{X+1} \right) = \frac{2}{9}$$

$$\frac{1}{6} - \frac{1}{X+1} = \frac{1}{9}$$

$$\frac{1}{X+1} = \frac{1}{6} - \frac{1}{9}$$

$$\frac{1}{X+1} = \frac{1}{18}$$

$$X + 1 = 18$$

$$X = 17$$

**Bài 6:** Tìm số X, biết

$$\left(\frac{1}{2} + \frac{1}{3} - \frac{1}{4}\right) : x = \left(\frac{1}{6} + \frac{1}{9} - \frac{1}{12}\right)$$

*Bài giải*

$$\left(\frac{1}{2} + \frac{1}{3} - \frac{1}{4}\right) : x = \left(\frac{1}{6} + \frac{1}{9} - \frac{1}{12}\right)$$

$$\left(\frac{1}{2} + \frac{1}{3} - \frac{1}{4}\right) : x = \frac{1}{3} \left(\frac{1}{2} + \frac{1}{3} - \frac{1}{4}\right)$$

$$x = 1 : \frac{1}{3}$$

$$x = 3$$

Giáo viên: Nguyễn Thành Long