

Hướng dẫn trả lời các **câu hỏi trang 25 sách Toán lớp 7 CTST Bài 4 Quy tắc dấu ngoặc và quy tắc chuyển vế** đầy đủ và chính xác nhất, mời các em học sinh và phụ huynh cùng tham khảo

Câu 1 trang 25 SGK Toán 7 CTST tập 1

Tính:

$$a) \left(\frac{3}{4} : 1\frac{1}{2} \right) - \left(\frac{5}{6} : \frac{1}{3} \right)$$

$$b) \left[\left(\frac{-1}{5} \right) : \frac{1}{10} \right] - \frac{5}{7} \cdot \left(\frac{2}{3} - \frac{1}{5} \right)$$

$$c) (-0,4) + 2\frac{2}{5} \cdot \left[\left(\frac{-2}{3} \right) + \frac{1}{2} \right]^2 \quad d) \left\{ \left[\left(\frac{1}{25} - 0,6 \right)^2 : \frac{49}{125} \right] \cdot \frac{5}{6} \right\} - \left[\left(\frac{-1}{3} \right) + \frac{1}{2} \right]$$

Hướng dẫn giải:

a)

$$\begin{aligned} & \left(\frac{3}{4} : 1\frac{1}{2}\right) - \left(\frac{5}{6} : \frac{1}{3}\right) \\ &= \left(\frac{3}{4} : \frac{3}{2}\right) - \left(\frac{5}{6} \cdot 3\right) \\ &= \left(\frac{3}{4} \cdot \frac{2}{3}\right) - \frac{5}{2} \\ &= \frac{1}{2} - \frac{5}{2} \\ &= -2. \end{aligned}$$

b)

$$\begin{aligned} & \left[\left(\frac{-1}{5}\right) : \frac{1}{10}\right] - \frac{5}{7} \cdot \left(\frac{2}{3} - \frac{1}{5}\right) \\ &= \left(\frac{-1}{5}\right) \cdot 10 - \frac{5}{7} \cdot \left(\frac{10}{15} - \frac{3}{15}\right) \\ &= -2 - \frac{5}{7} \cdot \frac{7}{15} \\ &= -2 - \frac{1}{3} \\ &= \frac{-6}{3} - \frac{1}{3} \\ &= \frac{-7}{3} \end{aligned}$$

c)

$$\begin{aligned} & (-0,4) + 2\frac{2}{5} \cdot \left[\left(\frac{-2}{3}\right) + \frac{1}{2}\right]^2 \\ &= \left(-\frac{2}{5}\right) + \frac{12}{5} \cdot \left[\left(\frac{-4}{6}\right) + \frac{3}{6}\right]^2 \\ &= \left(-\frac{2}{5}\right) + \frac{12}{5} \cdot \left(\frac{-1}{6}\right)^2 \\ &= \left(-\frac{2}{5}\right) + \frac{12}{5} \cdot \frac{1}{36} \\ &= \left(-\frac{2}{5}\right) + \frac{1}{15} \\ &= \left(-\frac{6}{15}\right) + \frac{1}{15} \\ &= \frac{-5}{15} = \frac{-1}{3} \end{aligned}$$

d)

$$\begin{aligned}
 & \left\{ \left[\left(\frac{1}{25} - 0,6 \right)^2 : \frac{49}{125} \right] \cdot \frac{5}{6} \right\} - \left[\left(\frac{-1}{3} \right) + \frac{1}{2} \right] \\
 = & \left\{ \left[\left(\frac{1}{25} - \frac{3}{5} \right)^2 \cdot \frac{125}{49} \right] \cdot \frac{5}{6} \right\} - \left[\left(\frac{-2}{6} \right) + \frac{3}{6} \right] \\
 = & \left\{ \left[\left(\frac{-14}{25} \right)^2 \cdot \frac{125}{49} \right] \cdot \frac{5}{6} \right\} - \frac{1}{6} \\
 = & \left\{ \left[\left(\frac{-14}{25} \right)^2 \cdot \frac{125}{49} \right] \cdot \frac{5}{6} \right\} - \frac{1}{6} \\
 = & \left\{ \frac{196}{25^2} \cdot \frac{25 \cdot 5}{49} \cdot \frac{5}{6} \right\} - \frac{1}{6} \\
 = & \left(\frac{4 \cdot 49 \cdot 25 \cdot 5 \cdot 5}{25^2 \cdot 49 \cdot 6} \right) - \frac{1}{6} \\
 = & \frac{4}{6} - \frac{1}{6} = \frac{3}{6} = \frac{1}{2}
 \end{aligned}$$

Câu 3 trang 25 SGK Toán 7 CTST tập 1

Cho biểu

$$A = \left(2 + \frac{1}{3} - \frac{2}{5} \right) - \left(7 - \frac{3}{5} - \frac{4}{3} \right) - \left(\frac{1}{5} + \frac{5}{3} - 4 \right).$$

thức:

Hãy tính giá trị của A theo hai cách:

- Tính giá trị của từng biểu thức trong dấu ngoặc trước.
- Bỏ dấu ngoặc rồi nhóm các số hạng thích hợp.

Hướng dẫn giải:

a)

$$A = \left(2 + \frac{1}{3} - \frac{2}{5}\right) - \left(7 - \frac{3}{5} - \frac{4}{3}\right) - \left(\frac{1}{5} + \frac{5}{3} - 4\right).$$

$$A = \left(\frac{30}{15} + \frac{5}{15} - \frac{6}{15}\right) - \left(\frac{105}{15} - \frac{9}{15} - \frac{20}{15}\right) - \left(\frac{3}{15} + \frac{25}{15} - \frac{60}{15}\right)$$

$$A = \frac{29}{15} - \frac{76}{15} - \left(\frac{-32}{15}\right)$$

$$A = \frac{29}{15} - \frac{76}{15} + \frac{32}{15}$$

$$A = \frac{-15}{15}$$

$$A = -1$$

b)

$$A = \left(2 + \frac{1}{3} - \frac{2}{5}\right) - \left(7 - \frac{3}{5} - \frac{4}{3}\right) - \left(\frac{1}{5} + \frac{5}{3} - 4\right)$$

$$A = 2 + \frac{1}{3} - \frac{2}{5} - 7 + \frac{3}{5} + \frac{4}{3} - \frac{1}{5} - \frac{5}{3} + 4$$

$$A = (2 - 7 + 4) + \left(\frac{1}{3} + \frac{4}{3} - \frac{5}{3}\right) + \left(-\frac{2}{5} + \frac{3}{5} - \frac{1}{5}\right)$$

$$A = -1 + 0 + 0 = -1$$

Câu 4 trang 25 SGK Toán 7 CTST tập 1

Tìm x, biết:

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

b) $\frac{3}{7} - x = \frac{2}{5};$

c) $\frac{4}{9} - \frac{2}{3}x = \frac{1}{3};$

d) $\frac{3}{10}x - 1\frac{1}{2} = \left(\frac{-2}{7}\right) : \frac{5}{14}$

Hướng dẫn giải:

a)

$$\begin{aligned}
 x + \frac{3}{5} &= \frac{2}{3} \\
 x &= \frac{3}{5} - \frac{2}{3} \\
 x &= \frac{10}{15} - \frac{9}{15} \\
 x &= \frac{1}{15}
 \end{aligned}$$

b)

$$\begin{aligned}
 \frac{3}{7} - x &= \frac{2}{5} \\
 x &= \frac{3}{7} - \frac{2}{5} \\
 x &= \frac{15}{35} - \frac{14}{35} \\
 x &= \frac{1}{35}
 \end{aligned}$$

c)

$$\begin{aligned}
 \frac{4}{9} - \frac{2}{3}x &= \frac{1}{3} \\
 \frac{2}{3}x &= \frac{4}{9} - \frac{1}{3} \\
 \frac{2}{3}x &= \frac{4}{9} - \frac{3}{9} \\
 \frac{2}{3}x &= \frac{1}{9} \\
 x &= \frac{1}{9} \cdot \frac{3}{2} \\
 x &= \frac{1}{9} \cdot \frac{3}{2} \\
 x &= \frac{1}{6}
 \end{aligned}$$

d)

$$\begin{aligned} \frac{3}{10}x - 1\frac{1}{2} &= \left(\frac{-2}{7}\right) : \frac{5}{14} \\ \frac{3}{10}x - \frac{3}{2} &= \left(\frac{-2}{7}\right) \cdot \frac{14}{5} \\ \frac{3}{10}x - \frac{3}{2} &= \frac{-4}{5} \\ \frac{3}{10}x &= \frac{-4}{5} + \frac{3}{2} \\ \frac{3}{10}x &= \frac{-8}{10} + \frac{15}{10} \\ \frac{3}{10}x &= \frac{7}{10} \\ x &= \frac{7}{10} : \frac{3}{10} \\ x &= \frac{7}{3} \end{aligned}$$

Câu 5 trang 25 SGK Toán 7 CTST tập 1

Tìm x, biết:

a) $\frac{2}{9} : x + \frac{5}{6} = 0,5;$

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

c) $1\frac{1}{4} : \left(x - \frac{2}{3}\right) = 0,75;$

d) $\left(-\frac{5}{6}x + \frac{5}{4}\right) : \frac{3}{2} = \frac{4}{3}.$

Hướng dẫn giải:

a)

$$\begin{aligned} \frac{2}{3} : x + \frac{5}{6} &= 0,5 \\ \frac{2}{3} : x &= \frac{5}{6} - \frac{5}{6} \\ \frac{2}{3} : x &= \frac{0}{6} \\ \frac{2}{3} : x &= \frac{-2}{6} \\ x &= \frac{2}{3} : \frac{-2}{6} \\ x &= \frac{2}{3} \cdot \frac{-6}{2} \\ x &= \frac{-2}{3} \end{aligned}$$

b)

$$\begin{aligned} \frac{3}{4} - \left(x - \frac{2}{3}\right) &= 1\frac{1}{3} \\ x - \frac{2}{3} &= \frac{3}{4} - 1\frac{1}{3} \\ x - \frac{2}{3} &= \frac{3}{4} - \frac{4}{3} \\ x - \frac{2}{3} &= \frac{9}{12} - \frac{16}{12} \\ x - \frac{2}{3} &= \frac{-7}{12} \\ x &= \frac{-7}{12} + \frac{2}{3} \\ x &= \frac{-7}{12} + \frac{8}{12} \\ x &= \frac{1}{12} \end{aligned}$$

c)

$$\begin{aligned} 1\frac{1}{4} : \left(x - \frac{2}{3}\right) &= 0,75 \\ \frac{5}{4} : \left(x - \frac{2}{3}\right) &= \frac{3}{4} \\ x - \frac{2}{3} &= \frac{5}{4} : \frac{3}{4} \\ x - \frac{2}{3} &= \frac{5}{4} \cdot \frac{4}{3} \\ x - \frac{2}{3} &= \frac{5}{3} \\ x &= \frac{5}{3} + \frac{2}{3} \\ x &= \frac{7}{3} \end{aligned}$$

d)

$$\begin{aligned} \left(-\frac{5}{6}x + \frac{5}{4}\right) : \frac{3}{2} &= \frac{4}{3} \\ -\frac{5}{6}x + \frac{5}{4} &= \frac{4}{3} \cdot \frac{3}{2} \\ -\frac{5}{6}x + \frac{5}{4} &= 2 \\ -\frac{5}{6}x &= 2 - \frac{5}{4} \\ -\frac{5}{6}x &= \frac{8}{4} - \frac{5}{4} \\ -\frac{5}{6}x &= \frac{3}{4} \\ x &= \frac{3}{4} : \left(-\frac{5}{6}\right) \\ x &= \frac{3}{4} \cdot \frac{-6}{5} \\ x &= \frac{-9}{10} \end{aligned}$$

Câu 6 trang 25 SGK Toán 7 CTST tập 1

Tính nhanh:

a) $\frac{13}{23} \cdot \frac{7}{11} + \frac{10}{23} \cdot \frac{7}{11};$

b) $\frac{5}{9} \cdot \frac{23}{11} - \frac{1}{11} \cdot \frac{5}{9} + \frac{5}{9}$

c) $\left[\left(-\frac{4}{9}\right) + \frac{3}{5}\right] : \frac{13}{17} + \left(\frac{2}{5} - \frac{5}{9}\right) : \frac{13}{17};$

d) $\frac{3}{16} : \left(\frac{3}{22} - \frac{3}{11}\right) + \frac{3}{16} : \left(\frac{1}{10} - \frac{2}{5}\right)$

Hướng dẫn giải:

a)

$$\begin{aligned} & \frac{13}{23} \cdot \frac{7}{11} + \frac{10}{23} \cdot \frac{7}{11} \\ &= \frac{7}{11} \left(\frac{13}{23} + \frac{10}{23} \right) \\ &= \frac{7}{11} \cdot 1 \\ &= \frac{7}{11} \end{aligned}$$

b)

$$\begin{aligned} & \frac{5}{9} \cdot \frac{23}{11} - \frac{1}{11} \cdot \frac{5}{9} + \frac{5}{9} \\ &= \frac{5}{9} \cdot \left(\frac{23}{11} - \frac{1}{11} + 1 \right) \\ &= \frac{5}{9} \cdot (2 + 1) \\ &= \frac{5}{9} \cdot 3 = \frac{5}{3} \end{aligned}$$

c)

$$\begin{aligned} & \left[\left(-\frac{4}{9} + \frac{3}{5} \right) : \frac{13}{17} \right] + \left(\frac{2}{5} - \frac{5}{9} \right) : \frac{13}{17} \\ &= \left(-\frac{4}{9} + \frac{3}{5} \right) \cdot \frac{17}{13} + \left(\frac{2}{5} - \frac{5}{9} \right) \cdot \frac{17}{13} \\ &= \frac{17}{13} \cdot \left(-\frac{4}{9} + \frac{3}{5} + \frac{2}{5} - \frac{5}{9} \right) \\ &= \frac{17}{13} \cdot \left[\left(-\frac{4}{9} - \frac{5}{9} \right) + \left(\frac{3}{5} + \frac{2}{5} \right) \right] \\ &= \frac{17}{13} \cdot (-1 + 1) \\ &= \frac{17}{13} \cdot 0 = 0 \end{aligned}$$

d)

d)

$$\begin{aligned} & \frac{3}{16} : \left(\frac{3}{22} - \frac{3}{11} \right) + \frac{3}{16} : \left(\frac{1}{10} - \frac{2}{5} \right) \\ &= \frac{3}{16} : \left(\frac{3}{22} - \frac{6}{22} \right) + \frac{3}{16} : \left(\frac{1}{10} - \frac{4}{10} \right) \\ &= \frac{3}{16} : \frac{-3}{22} + \frac{3}{16} : \frac{-3}{10} \\ &= \frac{3}{16} \cdot \frac{-22}{3} + \frac{3}{16} \cdot \frac{-10}{3} \\ &= \frac{3}{16} \cdot \left(\frac{-22}{3} + \frac{-10}{3} \right) \\ &= \frac{3}{16} \cdot \frac{-32}{3} \\ &= -2 \end{aligned}$$