

TÀI LIỆU TOÁN LỚP 7
HƯỚNG DẪN BÀI TẬP VỀ NHÀ
Liên hệ đăng kí học: 0832.64.64.64

Họ và tên:Ngày học:.....

ĐẠI SỐ

Câu 1. Thực hiện phép tính:

a) $\left(-\frac{3}{4}\right)^2 \cdot \frac{8}{15}$

b) $2022^0 - \frac{-1}{2}$

HD:

a) $\left(-\frac{3}{4}\right)^2 \cdot \frac{8}{15} = \frac{9}{16} \cdot \frac{8}{15} = \frac{3}{10}$

b) $2022^0 - \frac{-1}{2} = 1 + \frac{1}{2} = \frac{3}{2}$

Câu 2. Thực hiện phép tính:

a) $\frac{3}{7} + \left(-\frac{5}{2}\right) \cdot \left(-\frac{3}{5}\right)$

b) $12 \cdot \left(-\frac{2}{3}\right)^2 + \frac{4}{3}$

HD:

a) $\frac{3}{7} + \left(-\frac{5}{2}\right) \cdot \left(-\frac{3}{5}\right) = \frac{3}{7} + \frac{3}{2} = \frac{6}{14} + \frac{21}{14} = \frac{27}{14}$

b) $12 \cdot \left(-\frac{2}{3}\right)^2 + \frac{4}{3} = 12 \cdot \frac{4}{9} + \frac{4}{3} = \frac{16}{3} + \frac{4}{3} = \frac{20}{3}$

Câu 3. Thực hiện phép tính:

a) $0,25 - \frac{2}{3} + 1\frac{1}{4}$

b) $\frac{3^2}{2} : \frac{1}{4} + \frac{3}{4} \cdot 2010^0$

HD:

a) $0,25 - \frac{2}{3} + 1\frac{1}{4} = \frac{1}{4} - \frac{2}{3} + \frac{5}{4} = \frac{3}{2} - \frac{2}{3} = \frac{9}{6} - \frac{4}{6} = \frac{5}{6}$

b) $\frac{3^2}{2} : \frac{1}{4} + \frac{3}{4} \cdot 2010^0 = \frac{9}{2} \cdot 4 + \frac{3}{4} \cdot 1 = 18 + \frac{3}{4} = 18\frac{3}{4}$

Câu 4. Thực hiện phép tính:

a) $\left(\frac{-1}{3}\right)^2 : \frac{5}{9} + (-1)^3$

b) $\frac{3^2}{5} - \left(4,5 - 6\frac{1}{2}\right)$

HD:

$$a) \left(\frac{-1}{3}\right)^2 : \frac{5}{9} + (-1)^3 = \frac{1}{9} \cdot \frac{9}{5} - 1 = \frac{1}{5} - 1 = \frac{-4}{5}$$

$$b) \frac{3^2}{5} - \left(4,5 - 6\frac{1}{2}\right) = \frac{9}{5} - \left(\frac{9}{2} - \frac{13}{2}\right) = \frac{9}{5} - (-2) = \frac{19}{5}$$

Câu 5. Thực hiện phép tính:

$$a) 12 : \{400 : [500 - (125 + 25 \cdot 7)]\} - 5^3 : 5^2$$

$$b) 303 - 3 \cdot \{[655 - (18 : 2 + 1) \cdot 4^3 + 5]\} : 10^0$$

HD:

$$\begin{aligned} a) & 12 : \{400 : [500 - (125 + 25 \cdot 7)]\} - 5^3 : 5^2 \\ & = 12 : \{400 : [500 - (125 + 175)]\} - 5 \\ & = 12 : \{400 : [500 - 300]\} - 5 \\ & = 12 : \{400 : 200\} - 5 \\ & = 12 : 2 - 5 = 1 \end{aligned}$$

$$\begin{aligned} b) & 303 - 3 \cdot \{[655 - (18 : 2 + 1) \cdot 4^3 + 5]\} : 10^0 \\ & = 303 - 3 \cdot \{[655 - (9 + 1) \cdot 64 + 5]\} \\ & = 303 - 3 \cdot \{[655 - 10 \cdot 64 + 5]\} \\ & = 303 - 3 \cdot \{[655 - 640 + 5]\} \\ & = 303 - 3 \cdot 20 \\ & = 303 - 60 = 243 \end{aligned}$$

Câu 6. Thực hiện phép tính:

$$a) 500 - \left\{5 \left[409 - (2^3 \cdot 3 - 21)^2\right] - 1724\right\}$$

$$b) \left(2\frac{1}{3} + 3,5\right) : \left\{\left(-4\frac{1}{6} + 3\frac{1}{7}\right) + 7,5\right\}$$

HD:

$$\begin{aligned} a) & 500 - \left\{5 \left[409 - (2^3 \cdot 3 - 21)^2\right] - 1724\right\} \\ & = 500 - \left\{5 \left[409 - (8 \cdot 3 - 21)^2\right] - 1724\right\} \\ & = 500 - \left\{5 \left[409 - 3^2\right] - 1724\right\} \\ & = 500 - \{5 \cdot 400 - 1724\} \\ & = 500 - 276 = 224 \end{aligned}$$

$$\begin{aligned} b) & \left(2\frac{1}{3} + 3,5\right) : \left\{\left(-4\frac{1}{6} + 3\frac{1}{7}\right) + 7,5\right\} \\ & = \left(\frac{7}{3} + \frac{7}{2}\right) : \left\{\left(-\frac{25}{6} + \frac{22}{7}\right) + \frac{15}{2}\right\} \\ & = \frac{35}{6} : \left\{\frac{-43}{42} + \frac{15}{2}\right\} \\ & = \frac{35}{6} : \frac{136}{21} = \frac{35}{6} \cdot \frac{21}{136} = \frac{245}{272} \end{aligned}$$

Câu 7. Tính hợp lí:

a) $\frac{1}{3} \cdot \frac{5}{4} + \frac{1}{3} \cdot \frac{7}{4} - 2022^0$

b) $\frac{5}{13} + \frac{-5}{17} + \frac{-21}{41} + \frac{8}{13} + \frac{-20}{41}$

HD:

a) $\frac{1}{3} \cdot \frac{5}{4} + \frac{1}{3} \cdot \frac{7}{4} - 2022^0 = \frac{1}{3} \cdot \left(\frac{5}{4} + \frac{7}{4} \right) - 1 = \frac{1}{3} \cdot 3 - 1 = 0$

b) $\frac{5}{13} + \frac{-5}{17} + \frac{-21}{41} + \frac{8}{13} + \frac{-20}{41} = \left(\frac{5}{13} + \frac{8}{13} \right) + \left(\frac{-21}{41} + \frac{-20}{41} \right) + \frac{-5}{17} = 1 + (-1) + \frac{-5}{17} = \frac{-5}{17}$

Câu 8. Tính hợp lí:

a) $\frac{4}{9} + \frac{23}{37} - \frac{22}{9} + \frac{14}{37} + 1^3$

b) $\frac{2}{5} + \frac{3}{5} : \left(\frac{-3}{2} \right) + \frac{1}{2} - \frac{1001}{2002}$

HD:

a) $\frac{4}{9} + \frac{23}{37} - \frac{22}{9} + \frac{14}{37} + 1^3 = \left(\frac{4}{9} - \frac{22}{9} \right) + \left(\frac{23}{37} + \frac{14}{37} \right) + 1 = -2 + 1 + 1 = 0$

b) $\frac{2}{5} + \frac{3}{5} : \left(\frac{-3}{2} \right) + \frac{1}{2} - \frac{1001}{2002} = \frac{2}{5} + \frac{3}{5} \cdot \left(\frac{-2}{3} \right) + \frac{1}{2} - \frac{1}{2} = \frac{2}{5} + \frac{-2}{5} = 0$

Câu 9. Tìm x biết:

a) $\frac{1}{4} - 3x + \frac{3}{2} = -0,75$

b) $\frac{2}{7} - \left(\frac{2}{3} + 2x \right) = \frac{5}{7}$

HD:

a) $\frac{1}{4} - 3x + \frac{3}{2} = -0,75$

b) $\frac{2}{7} - \left(\frac{2}{3} + 2x \right) = \frac{5}{7}$

$\Rightarrow -3x = -0,75 - \frac{1}{4} - \frac{3}{2}$

$\Rightarrow \frac{2}{3} + 2x = \frac{2}{7} - \frac{5}{7}$

$\Rightarrow -3x = \frac{-5}{2}$

$\Rightarrow \frac{2}{3} + 2x = \frac{-3}{7}$

$\Rightarrow x = \frac{5}{6}$

$\Rightarrow 2x = \frac{-3}{7} - \frac{2}{3}$

$\Rightarrow 2x = \frac{-23}{21}$

$\Rightarrow x = \frac{-23}{42}$

Câu 10. Tìm x biết:

a) $\left(\frac{-2}{3}x - \frac{3}{5} \right) \left(\frac{3}{-2} - \frac{10}{3} \right) = \frac{2}{5}$

b) $\frac{-3}{2} - 2x + \frac{3}{4} = -2$

HD:

a) $\left(\frac{-2}{3}x - \frac{3}{5} \right) \left(\frac{3}{-2} - \frac{10}{3} \right) = \frac{2}{5}$

$$\Rightarrow \left(\frac{-2}{3}x - \frac{3}{5}\right) \cdot \frac{-29}{6} = \frac{2}{5} \Rightarrow \frac{-2}{3}x - \frac{3}{5} = \frac{2}{5} : \frac{-29}{6} \Rightarrow \frac{-2}{3}x - \frac{3}{5} = \frac{-12}{145}$$

$$\Rightarrow \frac{-2}{3}x = \frac{-12}{145} + \frac{3}{5} \Rightarrow \frac{-2}{3}x = \frac{15}{29} \Rightarrow x = \frac{15}{29} : \frac{-2}{3} \Rightarrow x = \frac{-45}{58}$$

$$\text{b) } \frac{-3}{2} - 2x + \frac{3}{4} = -2$$

$$\Rightarrow -2x = -2 - \frac{-3}{2} - \frac{3}{4} \Rightarrow -2x = \frac{-5}{4} \Rightarrow x = \frac{-5}{4} : (-2) \Rightarrow x = \frac{-5}{8}$$

HÌNH HỌC

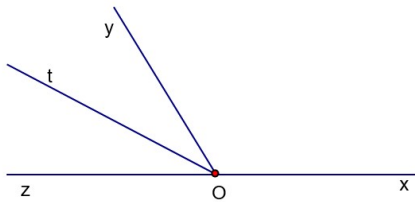
Câu 4. Cho hai góc kề bù $\widehat{xOy}, \widehat{yOz}$ sao cho $\widehat{xOy} = 120^\circ$.

a) Tính \widehat{yOz}

b) Gọi Ot là tia phân giác của góc \widehat{yOz} . Chứng tỏ $\widehat{tOy} = \frac{1}{4}\widehat{xOy}$.

HD:

HD



a) Vì hai góc $\widehat{xOy}, \widehat{yOz}$ là hai góc kề bù $\widehat{yOz} = 180^\circ - 120^\circ = 60^\circ$

Vậy $\widehat{yOz} = 60^\circ$

b) Vì Ot là tia phân giác của \widehat{yOz} nên có:

$$\widehat{tOy} = \widehat{tOz} = \frac{1}{2}\widehat{yOz} = \frac{1}{2}60^\circ = 30^\circ$$

mà $\widehat{xOy} = 120^\circ$ vậy $\widehat{tOy} = \frac{1}{4}\widehat{xOy}$