

Correction du DM de Mathématiques. 3^{ème}

Fractions.

Exercice 25 page 17 (TRANSMATH, Nathan, 2008). (3+3=6pts)

$$A = \frac{\frac{5}{2} - \frac{7}{4}}{\frac{3}{8}} = \frac{\frac{10}{4} - \frac{7}{4}}{\frac{3}{8}} = \frac{3}{4} \times \frac{8}{3} = \frac{3 \times 2 \times 4}{4 \times 3} \text{ donc } \boxed{A = \frac{6}{3} = 2}$$
$$B = \frac{\frac{5}{4} - 3}{2 \times \frac{11}{6}} = \frac{\frac{5}{4} - \frac{12}{4}}{\frac{2 \times 11}{2 \times 3}} = \frac{-\frac{7}{4}}{\frac{11}{3}} = -\frac{7}{4} \times \frac{3}{11} \text{ donc } \boxed{B = -\frac{21}{44}}$$

Exercice 26 page 17 (TRANSMATH, Nathan, 2008). (3+3+3+1=10pts)

a)

$$A = a + b - c = \frac{3}{2} + (-5) - \frac{2}{3} = \frac{9}{6} - \frac{30}{6} - \frac{4}{6} \text{ donc } \boxed{A = -\frac{25}{6}}$$
$$B = a - (b - c) = \frac{3}{2} - \left(-5 - \frac{2}{3}\right) = \frac{3}{2} - \left(\frac{-15}{3} - \frac{2}{3}\right) = \frac{3}{2} - \left(\frac{-17}{3}\right) = \frac{9}{6} + \frac{34}{6} \text{ donc } \boxed{B = \frac{43}{6}}$$
$$C = a \times \frac{b}{c} = \frac{3}{2} \times \frac{-5}{\frac{2}{3}} = \frac{3}{2} \times (-5) \times \frac{3}{2} \text{ donc } \boxed{C = -\frac{45}{4}}$$

b) Le seul nombre décimal est $\boxed{C = -11.25}$

Exercice 28 page 17 (TRANSMATH, Nathan, 2008). (2+2=4 pts)

a) Le périmètre est : $P = \frac{4}{5} \times 2 + \frac{1}{4} \times 2 = \frac{8}{5} + \frac{1}{2} = \frac{16}{10} + \frac{5}{10} = \frac{21}{10} = \boxed{2,1 \text{ hm}}$

b) L'aire est : $A = \frac{4}{5} \times \frac{1}{4} = \boxed{\frac{1}{5} \text{ hm}^2}$