

# 4<sup>e</sup> FE - Fractions

## exc 11

a)  $\frac{3}{5} = \frac{3 \times 7}{5 \times 7} = \frac{21}{35}$

b)  $\frac{3}{4} = \frac{3 \times 15}{4 \times 15} = \frac{45}{60}$

c)  $\frac{80}{100} = \frac{80 \div 20}{100 \div 20} = \frac{4}{5}$

d)  $\frac{49}{21} = \frac{49 \div 7}{21 \div 7} = \frac{7}{3}$

## exc 12

a)  $\frac{4}{3} = \frac{20}{15}$   
 (x5 from 4 to 20, x5 from 3 to 15)

b)  $\frac{5}{6} = \frac{30}{36}$   
 (x6 from 5 to 30, x6 from 6 to 36)

c)  $\frac{3,4}{7,8} = \frac{34}{78}$   
 (x10 from 3,4 to 34, x10 from 7,8 to 78)

d)  $\frac{56}{24} = \frac{7}{3}$   
 (÷8 from 56 to 7, ÷8 from 24 to 3)

e)  $\frac{72}{45} = \frac{8}{5}$   
 (÷9 from 72 to 8, ÷9 from 45 to 5)

## exc 13

$\frac{81}{99}$   $\frac{6}{7}$   $\frac{7}{8}$   $\frac{12}{16}$   $\frac{75}{100}$   $\frac{9}{11}$   $\frac{12}{14}$   $\frac{3}{4}$   $\frac{36}{42}$

## exc 5

$\frac{45}{25} = \frac{9}{5}$   
 (÷5 from 45 to 9, ÷5 from 25 to 5)

$\frac{24}{16} = \frac{3}{2}$   
 (÷8 from 24 to 3, ÷8 from 16 to 2)

## exc 6

$\frac{5}{3} = \frac{5 \times 2}{3 \times 2} = \frac{10}{6}$   
 $\frac{10}{6} = \frac{10 \times 2}{6 \times 2} = \frac{20}{12}$   
 $\frac{20}{12} = \frac{20 \times 3}{12 \times 3} = \frac{60}{36}$   
 $\frac{60}{36} = \frac{60 \div 9}{36 \div 9} = \frac{20}{12}$   
 $\frac{20}{12} = \frac{20 \div 4}{12 \div 4} = \frac{5}{3}$

ex 7

a)  $\frac{8}{7} = \frac{64}{56}$

$\overset{\times 8}{\curvearrowright}$

b)  $\frac{-5}{6} = \frac{40}{-48}$

$\overset{\times -8}{\curvearrowright}$

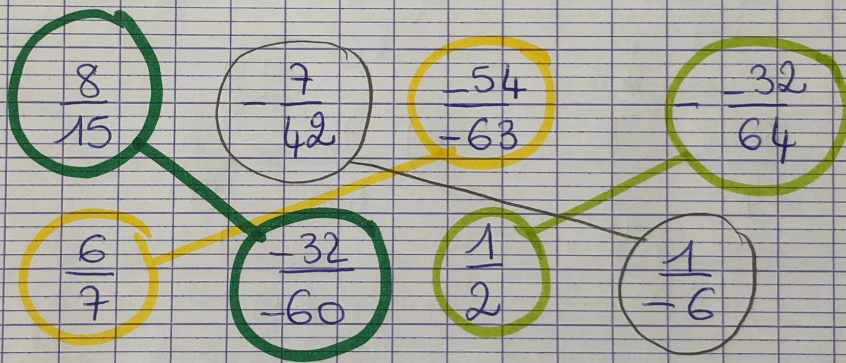
e)  $-\frac{35}{1} = \frac{-28}{8}$

$\overset{\times 8}{\curvearrowright}$

ou  $-\frac{35}{1} = -\frac{7}{2} = -\frac{28}{8}$

$\overset{\times 4}{\curvearrowright}$

ex 8



ex 20

$$A = \frac{5}{8} \times \frac{-3}{2}$$

$$A = \frac{5 \times (-3)}{8 \times 2}$$

$$A = -\frac{3 \times 5}{2 \times 2 \times 2 \times 2}$$

← 1 seul facteur négatif donc A est négatif

j'ai décomposé en facteurs premiers le 8  
MAIS il m'y a pas de facteur commun au numérateur et au dénominateur.

$A = -\frac{15}{16}$  ← fraction irréductible

$$B = \frac{7}{8} \times \frac{-3}{8}$$

$$B = \frac{7 \times 3}{8 \times 8}$$

$$B = \frac{21}{64}$$

$$C = -3 \times \frac{4}{5}$$

$$C = \frac{-3 \times 4}{5}$$

$$C = -\frac{12}{5}$$

$$D = \frac{-2}{11} \times \frac{-10}{3}$$

$$D = \frac{2 \times 10}{11 \times 3}$$

$$D = \frac{20}{33}$$

exc 21

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

$$A = \frac{-7 \times 5 \times (-1)}{3 \times 4 \times 3}$$

$$A = \frac{7 \times 5 \times 1}{3 \times 4 \times 3}$$

$$A = \frac{35}{36}$$

$$B = \frac{4}{3} \times \frac{-5}{7} \times \frac{-1}{3} \times (-5)$$

$$B = \frac{4 \times (-5) \times (-1) \times (-5)}{3 \times 7 \times 3}$$

$$B = -\frac{100}{63}$$

exc 22

$$a) \frac{-55}{63} \times \frac{35}{66} = -\frac{55 \times 35}{63 \times 66} = -\frac{5 \times 11 \times 7 \times 5}{9 \times 7 \times 6 \times 11} = \frac{25}{54}$$

$$b) A = \frac{49}{15} \times \frac{10}{21} = \frac{7 \times 7 \times 2 \times 5}{3 \times 5 \times 3 \times 7} = \frac{14}{9}$$

$$B = \frac{-28}{27} \times \frac{36}{7} = -\frac{4 \times 7 \times 2 \times 3}{3 \times 3 \times 3 \times 7} = -\frac{16}{3}$$

$$C = \frac{17}{52} \times \frac{39}{34}$$

← il y a 2 0 donc le résultat est positif.

$$C = \frac{17}{2 \times 2 \times 13} \times \frac{3 \times 13}{2 \times 17}$$

← décomposé en facteurs premiers

$$C = \frac{17 \times 3}{2 \times 2 \times 2 \times 7}$$

$$C = \frac{51}{56}$$

ex 23

$$A = \frac{-2}{21} \times \frac{14}{5} - \frac{8}{5}$$

puissance

$$A = \frac{-2 \times 2 \times 7}{3 \times 7 \times 5} - \frac{8}{5}$$

$$A = -\frac{4}{15} - \frac{8}{5}$$

$$A = -\frac{4}{15} - \frac{8 \times 3}{5 \times 3}$$

$$A = -\frac{4}{15} - \frac{24}{15}$$

$$A = -\frac{28}{15}$$

$$B = \frac{1}{4} + \frac{5}{3} \times \frac{-1}{8}$$

$$B = \frac{1}{4} + \frac{-5}{24}$$

$$B = \frac{1 \times 6}{4 \times 6} + \frac{-5}{24}$$

$$B = \frac{6}{24} + \frac{-5}{24}$$

$$B = \frac{1}{24}$$

$$C = \frac{4}{-3} + \frac{-7}{6} \times \frac{-2}{5}$$

$$C = \frac{4}{-3} + \frac{14}{30}$$

$$C = -\frac{4 \times 10}{3 \times 10} + \frac{14}{30}$$

$$C = -\frac{40}{30} + \frac{14}{30}$$

$$C = \frac{-26}{30} = -\frac{13}{15}$$