

CORRIGE – M. QUET

EXERCICE 1 : Compléter les écritures afin d'obtenir des fractions équivalentes :

a. $\frac{4}{3} = \frac{4 \times 7}{3 \times 7} = \frac{28}{21}$	b. $\frac{5}{7} = \frac{5 \times 9}{7 \times 9} = \frac{45}{63}$	c. $\frac{6}{5} = \frac{6 \times 7}{5 \times 7} = \frac{42}{35}$
d. $\frac{5}{9} = \frac{5 \times 8}{9 \times 8} = \frac{40}{72}$	e. $\frac{3}{8} = \frac{3 \times 9}{8 \times 9} = \frac{27}{72}$	f. $\frac{11}{6} = \frac{11 \times 8}{6 \times 8} = \frac{88}{48}$

EXERCICE 2 : Simplifier au maximum les fractions suivantes :

- a) $\frac{18}{21} = \frac{\boxed{3} \times 6}{\boxed{3} \times 7} = \frac{6}{7}$ b) $\frac{21}{49} = \frac{\boxed{7} \times 3}{\boxed{7} \times 7} = \frac{3}{7}$ c) $\frac{16}{18} = \frac{\boxed{2} \times 8}{\boxed{2} \times 9} = \frac{8}{9}$
- d) $\frac{84}{108} = \frac{\boxed{2} \times 42}{\boxed{2} \times 54} = \frac{42}{54} = \frac{\boxed{2} \times 21}{\boxed{2} \times 27} = \frac{21}{27} = \frac{\boxed{3} \times 7}{\boxed{3} \times 9} = \frac{7}{9}$
- e) $\frac{135}{180} = \frac{\boxed{5} \times 27}{\boxed{5} \times 36} = \frac{27}{36} = \frac{\boxed{9} \times 3}{\boxed{9} \times 4} = \frac{3}{4}$
- f) $\frac{210}{315} = \frac{\boxed{5} \times 42}{\boxed{5} \times 63} = \frac{42}{63} = \frac{\boxed{7} \times 6}{\boxed{7} \times 9} = \frac{6}{9} = \frac{2 \times \boxed{3}}{3 \times \boxed{3}} = \frac{2}{3}$
- g) $\frac{96}{132} = \frac{\boxed{2} \times 48}{\boxed{2} \times 66} = \frac{48}{66} = \frac{\boxed{2} \times 24}{\boxed{2} \times 33} = \frac{24}{33} = \frac{\boxed{3} \times 8}{\boxed{3} \times 11} = \frac{8}{11}$
- h) $\frac{525}{210} = \frac{\boxed{5} \times 105}{\boxed{5} \times 42} = \frac{105}{42} = \frac{\boxed{3} \times 35}{\boxed{3} \times 14} = \frac{35}{14} = \frac{\boxed{7} \times 5}{\boxed{7} \times 2} = \frac{5}{2}$
- i) $\frac{810}{240} = \frac{81 \times \boxed{10}}{24 \times \boxed{10}} = \frac{81}{24} = \frac{27 \times \boxed{3}}{8 \times \boxed{3}} = \frac{27}{8}$
- j) $\frac{22500}{1800} = \frac{225 \times \boxed{100}}{18 \times \boxed{100}} = \frac{225}{18} = \frac{25 \times \boxed{9}}{2 \times \boxed{9}} = \frac{25}{2}$
- k) $\frac{15 \times 12}{18 \times 35} = \frac{3 \times \boxed{5} \times 4 \times \boxed{3}}{\boxed{3} \times 6 \times 7 \times \boxed{5}} = \frac{3 \times 4}{6 \times 7} = \frac{\boxed{3} \times \boxed{2} \times 2}{\boxed{3} \times \boxed{2} \times 7} = \frac{2}{7}$
- l) $\frac{24 \times 54}{72 \times 30} = \frac{\boxed{8} \times \boxed{3} \times \boxed{9} \times 6}{\boxed{8} \times \boxed{9} \times \boxed{3} \times 10} = \frac{6}{10} = \frac{\boxed{2} \times 3}{\boxed{2} \times 5} = \frac{3}{5}$
- m) $\frac{39 \times 10}{15 \times 26} = \frac{\boxed{13} \times \boxed{3} \times \boxed{2} \times \boxed{5}}{\boxed{3} \times \boxed{5} \times \boxed{2} \times \boxed{13}} = \frac{1}{1} = 1$

EXERCICE 3 : Ecrire les quotients suivants sous forme de fractions et simplifier les résultats :

- a) $\frac{2,5}{10,5} = \frac{2,5 \times 2}{10,5 \times 2} = \frac{5}{21}$
- b) $\frac{48}{272} = \frac{\boxed{2} \times 24}{\boxed{2} \times 136} = \frac{24}{136} = \frac{\boxed{2} \times 12}{\boxed{2} \times 68} = \frac{12}{68} = \frac{\boxed{4} \times 3}{\boxed{4} \times 17} = \frac{3}{17}$
- c) $\frac{0,64}{80} = \frac{0,64 \times 100}{80 \times 100} = \frac{64}{8000} = \frac{\boxed{8} \times 8}{\boxed{8} \times 1000} = \frac{8}{1000} = \frac{\boxed{8} \times 1}{\boxed{8} \times 125} = \frac{1}{125}$
- d) $\frac{0,36}{600} = \frac{0,36 \times 100}{600 \times 100} = \frac{36}{60000} = \frac{\boxed{6} \times 6}{\boxed{6} \times 10000} = \frac{6}{10000} = \frac{\boxed{2} \times 3}{\boxed{2} \times 5000} = \frac{3}{5000}$