

EX 1

Ranger les nombres suivants dans l'ordre croissant.

4C20-1

1. $\frac{-7}{6}$; 2 ; $\frac{-8}{18}$; $\frac{9}{2}$; $\frac{8}{9}$
2. 2 ; $\frac{9}{4}$; $\frac{-2}{20}$; $\frac{-5}{2}$; $\frac{8}{10}$
3. $\frac{9}{4}$; $\frac{-5}{24}$; $\frac{4}{3}$; 1 ; $\frac{-3}{2}$

EX 2

Calculer et donner le résultat sous la forme d'une fraction simplifiée.

4C21

1. $\frac{3}{4} + \frac{1}{44} =$
2. $\frac{6}{2} + 8 =$
3. $\frac{7}{8} - \frac{5}{88} =$
4. $\frac{4}{6} - \frac{5}{54} =$

EX 3

Calculer et donner le résultat sous la forme d'une fraction simplifiée.

4C21

1. $\frac{-9}{8} - 3 =$
2. $\frac{-4}{2} + \frac{3}{16} =$
3. $\frac{3}{2} - \frac{-6}{22} =$
4. $\frac{1}{12} + \frac{-8}{2} =$

EX
4

Calculer et donner le résultat sous la forme d'une fraction simplifiée.

4C21-1

1. $\frac{1}{2} + \frac{8}{6} =$

2. $\frac{9}{88} + \frac{3}{8} =$

3. $\frac{3}{9} + \frac{6}{18} =$

4. $6 + \frac{9}{2} =$

EX
5

Calculer et donner le résultat sous la forme d'une fraction simplifiée.

4C21-1

1. $-5 + \frac{-4}{8} =$

2. $\frac{-9}{55} + \frac{8}{5} =$

3. $\frac{-6}{9} + \frac{6}{2} =$

4. $\frac{9}{25} + \frac{-9}{10} =$

EX
6

Calculer et donner le résultat sous forme irréductible.

4C22

1. $7 \times \frac{8}{9} =$

2. $\frac{1}{3} \times \frac{1}{10} =$

3. $\frac{1}{3} \times \frac{1}{4} =$

4. $\frac{5}{6} \times \frac{5}{8} =$

EX 7 Calculer et donner le résultat sous forme irréductible.

4C22

1. $\frac{-3}{-7} \times \frac{-7}{10}$

2. $\frac{2}{-5} \times \frac{1}{6}$

3. $\frac{3}{4} \times \frac{3}{-5}$

4. $\frac{-2}{7} \times \frac{-7}{9}$

EX 8 Calculer et donner le résultat sous forme irréductible.

4C22-2

1. $\frac{5}{8} \div \frac{3}{5} =$

2. $\frac{3}{8} \div \frac{5}{8} =$

3. $\frac{5}{7} \div \frac{4}{7} =$

4. $\frac{2}{7} \div \frac{1}{2} =$

EX 9 Calculer et donner le résultat sous forme irréductible.

4C22-2

1. $\frac{-7}{9} \div \frac{-5}{-9} =$

2. $\frac{3}{4} \div \frac{-5}{7} =$

3. $\frac{-1}{-10} \div \frac{-7}{10} =$

4. $\frac{5}{7} \div \frac{-4}{-9} =$



Corrections

EX
1

$$1. \quad \frac{-7}{6} = \frac{-7 \times 3}{6 \times 3} = \frac{-21}{18}$$

$$2 = \frac{36}{18}$$

$$\frac{-8}{18}$$

$$\frac{9}{2} = \frac{9 \times 9}{2 \times 9} = \frac{81}{18}$$

$$\frac{8}{9} = \frac{8 \times 2}{9 \times 2} = \frac{16}{18}$$

$$\frac{-21}{18} < \frac{-8}{18} < \frac{16}{18} < \frac{36}{18} < \frac{81}{18}$$

$$\text{Finalement : } \frac{-7}{6} < \frac{-8}{18} < \frac{8}{9} < 2 < \frac{9}{2}$$

$$2. \quad 2 = \frac{40}{20}$$

$$\frac{9}{4} = \frac{9 \times 5}{4 \times 5} = \frac{45}{20}$$

$$\frac{-2}{20}$$

$$\frac{-5}{2} = \frac{-5 \times 10}{2 \times 10} = \frac{-50}{20}$$

$$\frac{8}{10} = \frac{8 \times 2}{10 \times 2} = \frac{16}{20}$$

$$\frac{-50}{20} < \frac{-2}{20} < \frac{16}{20} < \frac{40}{20} < \frac{45}{20}$$

$$\text{Finalement : } \frac{-5}{2} < \frac{-2}{20} < \frac{8}{10} < 2 < \frac{9}{4}$$



$$3. \quad \frac{9}{4} = \frac{9 \times 6}{4 \times 6} = \frac{54}{24}$$

$$\frac{-5}{24}$$

$$\frac{4}{3} = \frac{4 \times 8}{3 \times 8} = \frac{32}{24}$$

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

$$\frac{-3}{2} = \frac{-3 \times 12}{2 \times 12} = \frac{-36}{24}$$

$$\frac{-36}{24} < \frac{-5}{24} < \frac{24}{24} < \frac{32}{24} < \frac{54}{24}$$

$$\text{Finalement : } \frac{-3}{2} < \frac{-5}{24} < 1 < \frac{4}{3} < \frac{9}{4}$$

EX

2

$$1. \quad \frac{3}{4} + \frac{1}{44} = \frac{3 \times 11}{4 \times 11} + \frac{1}{44} = \frac{33 + 1}{44} = \frac{34}{44} = \frac{17 \times 2}{22 \times 2} = \frac{17}{22}$$

$$2. \quad \frac{6}{2} + 8 = \frac{6}{2} + \frac{8 \times 2}{2} = \frac{6 + 16}{2} = \frac{22}{2} = 11$$

$$3. \quad \frac{7}{8} - \frac{5}{88} = \frac{7 \times 11}{8 \times 11} - \frac{5}{88} = \frac{77 - 5}{88} = \frac{72}{88} = \frac{9 \times 8}{11 \times 8} = \frac{9}{11}$$

$$4. \quad \frac{4}{6} - \frac{5}{54} = \frac{4 \times 9}{6 \times 9} - \frac{5}{54} = \frac{36 - 5}{54} = \frac{31}{54}$$

EX

3

$$1. \quad \frac{-9}{8} - 3 = \frac{-9}{8} - \frac{3 \times 8}{8} = \frac{-9 - 24}{8} = \frac{-33}{8} = -\frac{33}{8}$$



$$\begin{aligned}
 2. \quad \frac{-4}{2} + \frac{3}{16} &= \frac{-4 \times 8}{2 \times 8} + \frac{3}{16} = \frac{-32 + 3}{16} = \frac{-29}{16} = -\frac{29}{16} \\
 3. \quad \frac{3}{2} - \frac{-6}{22} &= \frac{3 \times 11}{2 \times 11} - \frac{-6}{22} = \frac{33 - (-6)}{22} = \frac{39}{22} \\
 4. \quad \frac{1}{12} + \frac{-8}{2} &= \frac{1}{12} + \frac{-8 \times 6}{2 \times 6} = \frac{1 + (-48)}{12} = \frac{-47}{12} = -\frac{47}{12}
 \end{aligned}$$

Ex

4

$$\begin{aligned}
 1. \quad \frac{1}{2} + \frac{8}{6} &= \frac{1 \times 3}{2 \times 3} + \frac{8}{6} = \frac{3 + 8}{6} = \frac{11}{6} \\
 2. \quad \frac{9}{88} + \frac{3}{8} &= \frac{9}{88} + \frac{3 \times 11}{8 \times 11} = \frac{9 + 33}{88} = \frac{42}{88} = \frac{21 \times 2}{44 \times 2} = \frac{21}{44} \\
 3. \quad \frac{3}{9} + \frac{6}{18} &= \frac{3 \times 2}{9 \times 2} + \frac{6}{18} = \frac{6 + 6}{18} = \frac{12}{18} = \frac{2 \times 6}{3 \times 6} = \frac{2}{3} \\
 4. \quad 6 + \frac{9}{2} &= \frac{6 \times 2}{2} + \frac{9}{2} = \frac{12 + 9}{2} = \frac{21}{2}
 \end{aligned}$$

Ex

5

$$\begin{aligned}
 1. \quad -5 + \frac{-4}{8} &= \frac{-5 \times 8}{8} + \frac{-4}{8} = \frac{-40 + (-4)}{8} = \frac{-44}{8} = -\frac{11 \times 4}{2 \times 4} = -\frac{11}{2} \\
 2. \quad \frac{-9}{55} + \frac{8}{5} &= \frac{-9}{55} + \frac{8 \times 11}{5 \times 11} = \frac{-9 + 88}{55} = \frac{79}{55} \\
 3. \quad \frac{-6}{9} + \frac{6}{2} &= \frac{-6 \times 2}{9 \times 2} + \frac{6 \times 9}{2 \times 9} = \frac{-12 + 54}{18} = \frac{42}{18} = \frac{7 \times 6}{3 \times 6} = \frac{7}{3} \\
 4. \quad \frac{9}{25} + \frac{-9}{10} &= \frac{9 \times 2}{25 \times 2} + \frac{-9 \times 5}{10 \times 5} = \frac{18 + (-45)}{50} = \frac{-27}{50} = -\frac{27}{50}
 \end{aligned}$$



EX

6

$$1. 7 \times \frac{8}{9} = \frac{7}{1} \times \frac{8}{9} = \frac{7 \times 8}{1 \times 9} = \frac{56}{9}$$

$$2. \frac{1}{3} \times \frac{1}{10} = \frac{1 \times 1}{3 \times 10} = \frac{1}{30}$$

$$3. \frac{1}{3} \times \frac{1}{4} = \frac{1 \times 1}{3 \times 4} = \frac{1}{12}$$

$$4. \frac{5}{6} \times \frac{5}{8} = \frac{5 \times 5}{6 \times 8} = \frac{25}{48}$$

EX

7

$$1. \frac{-3}{-7} \times \frac{-7}{10} = -\frac{3}{7} \times \frac{7}{10} = -\frac{3 \times 7}{7 \times 10} = -\frac{21}{70} = -\frac{3 \times 7}{10 \times 7} = -\frac{3}{10}$$

$$2. \frac{2}{-5} \times \frac{1}{6} = -\frac{2}{5} \times \frac{1}{6} = -\frac{2 \times 1}{5 \times 6} = -\frac{2}{30} = -\frac{1 \times 2}{15 \times 2} = -\frac{1}{15}$$

$$3. \frac{3}{4} \times \frac{3}{-5} = -\frac{3}{4} \times \frac{3}{5} = -\frac{3 \times 3}{4 \times 5} = -\frac{9}{20}$$

$$4. \frac{-2}{7} \times \frac{-7}{9} = \frac{2}{7} \times \frac{7}{9} = \frac{2 \times 7}{7 \times 9} = \frac{14}{63} = \frac{2 \times 7}{9 \times 7} = \frac{2}{9}$$

EX

8

$$1. \frac{5}{8} \div \frac{3}{5} = \frac{5}{8} \times \frac{5}{3} = \frac{5 \times 5}{8 \times 3} = \frac{25}{24}$$

$$2. \frac{3}{8} \div \frac{5}{8} = \frac{3}{8} \times \frac{8}{5} = \frac{3 \times 8}{8 \times 5} = \frac{24}{40} = \frac{3 \times 8}{5 \times 8} = \frac{3}{5}$$

$$3. \frac{5}{7} \div \frac{4}{7} = \frac{5}{7} \times \frac{7}{4} = \frac{5 \times 7}{7 \times 4} = \frac{35}{28} = \frac{5 \times 7}{4 \times 7} = \frac{5}{4}$$



$$4. \frac{2}{7} \div \frac{1}{2} = \frac{2}{7} \times 2 = \frac{2 \times 2}{7 \times 1} = \frac{4}{7}$$

EX
9

$$1. \frac{-7}{9} \div \frac{-5}{-9} = -\frac{7}{9} \times \frac{9}{5} = -\frac{7 \times 9}{9 \times 5} = -\frac{63}{45} = -\frac{7 \times \cancel{9}}{5 \times \cancel{9}} = -\frac{7}{5}$$

$$2. \frac{3}{4} \div \frac{-5}{7} = -\frac{3}{4} \times \frac{7}{5} = -\frac{3 \times 7}{4 \times 5} = -\frac{21}{20}$$

$$3. \frac{-1}{-10} \div \frac{-7}{10} = -\frac{1}{10} \times \frac{10}{7} = -\frac{1 \times 10}{10 \times 7} = -\frac{10}{70} = -\frac{1 \times \cancel{10}}{7 \times \cancel{10}} = -\frac{1}{7}$$

$$4. \frac{5}{7} \div \frac{-4}{-9} = \frac{5}{7} \times \frac{9}{4} = \frac{5 \times 9}{7 \times 4} = \frac{45}{28}$$