

3.5 Diviser des nombres naturels et des fractions

3.6 Diviser des fractions

Il y a deux façons de diviser des fractions.



1. Tu peux utiliser des dénominateurs communs.

$$\begin{array}{l} 3 \times 3 \\ 3 \times \frac{3}{4} \div \frac{1}{6} \times 2 \\ \frac{3 \times 3}{4} \times 2 \end{array}$$

Écris chaque fraction avec le dénominateur commun.

$$\frac{9}{12} \div \frac{2}{12} = \frac{9}{2} = \boxed{4\frac{1}{2}}$$

2. Tu peux diviser par fractione en multipliant par son inverse.

$$\frac{4}{5} \div \frac{2}{3}$$
$$\overset{2}{\cancel{4}} \frac{3}{\cancel{2}} \times \frac{3}{2} = \frac{6}{5} = 1 \frac{1}{5}$$

$$\frac{9}{10} \div \frac{2}{5}$$
$$\frac{9}{10} \div \frac{4}{10}$$
$$\frac{9}{4} = 2\frac{1}{4}$$

$$\frac{9}{10} \div \frac{2}{5}$$
$$\frac{9}{10} \times \frac{5}{2} = \frac{9}{4} = 2\frac{1}{4}$$

$$3 \times \frac{9}{4} \div \frac{2}{3} \times 4$$

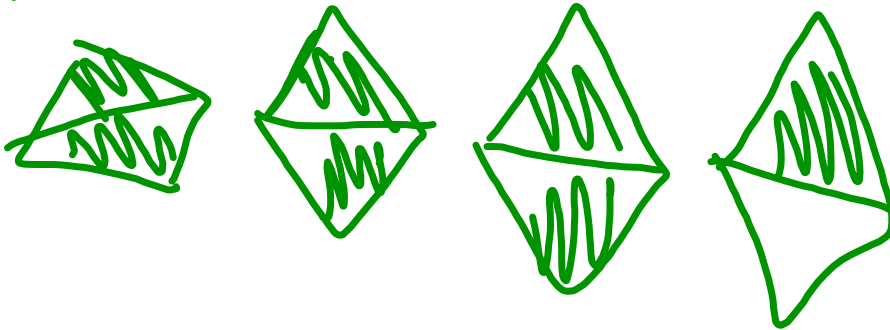
$$\frac{27}{12} \div \frac{8}{12}$$

$$\frac{27}{8} = 3\frac{3}{8}$$

$$\frac{9}{4} \times \frac{3}{2} = \frac{27}{8} = 3\frac{3}{8}$$

P.125

4a)



$$3\frac{1}{2} = \frac{7}{2}$$

$$a) 2\frac{3}{10} = \frac{23}{10}$$

$$b) 4\frac{1}{8} = \frac{33}{8}$$

$$c) 3\frac{5}{6} = \frac{23}{6}$$

$$d) 1\frac{2}{3} = \frac{5}{3}$$

$$e) 3\frac{2}{5} = \frac{17}{5}$$

$$f) 5\frac{1}{2} = \frac{11}{2}$$

$$g) 2\frac{4}{7} = \frac{18}{7}$$

$$h) 3\frac{5}{9} = \frac{32}{9}$$

$$i) 6\frac{2}{3} = \frac{20}{3}$$

6. a)  $\frac{11}{3} = 3\frac{2}{3}$

c)  $\frac{21}{5} = 4\frac{1}{5}$

e)  $\frac{19}{6} = 3\frac{1}{6}$

g)  $\frac{11}{2} = 5\frac{1}{2}$

i)  $\frac{37}{8} = 4\frac{5}{8}$

B)  $\frac{15}{4} = 3\frac{3}{4}$

D)  $\frac{11}{8} = 1\frac{3}{8}$

F)  $\frac{31}{7} = 4\frac{3}{7}$

h)  $\frac{43}{10} = 4\frac{3}{10}$





Q 11  
 a)  $1\frac{7}{8} \times 2\frac{2}{3}$   
 $\frac{15}{8} \times \frac{10}{3}$   
 $\frac{15}{1}$       $\frac{10}{3}$   
 $\frac{15}{1} \times \frac{10}{3} = \frac{150}{3} = 50$

B)  $4\frac{1}{6} \times 3\frac{2}{5}$   
 $\frac{25}{6} \times \frac{17}{5}$   
 $\frac{5 \times 17}{6}$   
 $\frac{85}{6} = 14\frac{1}{6}$   
 $\frac{3}{4} \times \frac{6}{6} = \frac{18}{24}$

c)  $2\frac{3}{7} \times \frac{5}{9}$

$\frac{17}{7} \times \frac{5}{9}$

$\frac{84}{27}$   
 $\frac{7}{7}$

$\frac{34}{9} = 3\frac{7}{9}$

$\frac{17}{2}$   
 $\frac{34}{34}$

$$\begin{aligned} D) \quad & 3\frac{1}{2} \times 2\frac{2}{7} \\ & \frac{\cancel{7}^1}{\cancel{2}_1} \times \frac{\cancel{14}^2}{\cancel{7}_1} \\ & \frac{8}{1} = 8 \end{aligned}$$

$$\begin{aligned} E) \quad & 2\frac{1}{4} \times 2\frac{2}{3} \\ & \frac{\cancel{4}^3}{\cancel{1}_1} \times \frac{\cancel{6}^2}{\cancel{3}_1} \\ & 6 \end{aligned}$$

$$F) 1\frac{4}{5} \times 2\frac{1}{3}$$

$$\overset{3}{\cancel{9}} \times \frac{7}{\cancel{3}}$$

$$\frac{21}{5} = 4\frac{1}{5}$$

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$$4. \text{ a) } \frac{5}{9} \quad \frac{9}{5}$$

$$\text{b) } \frac{3}{7} \quad \frac{7}{3}$$

$$\text{c) } \frac{7}{8} \quad \frac{8}{7}$$

$$\text{d) } \frac{14}{15} \quad \frac{15}{14}$$

$$6) \quad \frac{3}{5} \div \frac{9}{10}$$

$$a) \quad \frac{10}{9}$$

$$b) \quad \frac{2}{8} \times \frac{10^2}{9^2} = \frac{2}{3}$$

$$8. \frac{7}{10} \div \frac{3}{10}$$

$$\frac{7}{3} = 2\frac{1}{3}$$

$$B) \frac{5}{9} \div \frac{2}{9}$$

$$2\frac{5}{2} = 2\frac{1}{2}$$

$$C) \frac{3}{5} \div \frac{2}{5} = \frac{3}{2} = 1\frac{1}{2}$$

$$D) \frac{4}{5} \div \frac{2}{5} = \frac{4}{2} = 2$$



9.

$$a) \frac{8}{5} \div \frac{3}{4} = \frac{8}{5} \times \frac{4}{3} = \frac{32}{15} = 2\frac{2}{15}$$

$$b) \frac{9}{10} \div \frac{5}{3} = \frac{9}{10} \times \frac{3}{5} = \frac{27}{50}$$

$$c) \frac{7}{2} \div \frac{4}{3} = \frac{7}{2} \times \frac{3}{4} = \frac{21}{8} = 2\frac{5}{8}$$

$$d) \frac{1}{2} \div \frac{7}{6} = \frac{1}{2} \times \frac{6}{7} = \frac{3}{7}$$

$$10. a) \frac{7}{12} \div \frac{1}{4} \stackrel{\times 3}{=} \frac{7}{12} \div \frac{3}{12} = \frac{7}{3} = 2\frac{1}{3}$$

$$b) \frac{3}{5} \stackrel{\times 2}{\div} \frac{11}{10} = \frac{6}{10} \div \frac{11}{10} = \frac{6}{11}$$

$$c) \frac{5}{2} \stackrel{\times 2}{\div} \frac{1}{3} \stackrel{\times 3}{=} \frac{15}{6} \div \frac{2}{6} = \frac{15}{2} = 7\frac{1}{2}$$

$$d) \frac{5}{6} \stackrel{\times 4}{\div} \frac{9}{8} \stackrel{\times 3}{=} \frac{20}{24} \div \frac{27}{24} = \frac{20}{27}$$