
Exercices sur les fractions

Exercice n° 1 Compléter les égalités.

1. $\frac{5}{6} = \frac{\quad}{\quad} = \frac{\quad}{30}$

2. $\frac{1}{4} = \frac{\quad}{\quad} = \frac{\quad}{32}$

3. $\frac{3}{8} = \frac{\quad}{\quad} = \frac{\quad}{24}$

4. $5 = \frac{\quad}{\quad} = \frac{\quad}{3}$

5. $\frac{4}{9} = \frac{\quad}{\quad} = \frac{\quad}{90}$

6. $1 = \frac{\quad}{\quad} = \frac{\quad}{7}$

7. $\frac{1}{9} = \frac{\quad}{\quad} = \frac{\quad}{63}$

8. $\frac{1}{5} = \frac{\quad}{\quad} = \frac{\quad}{15}$

9. $\frac{3}{7} = \frac{\quad}{\quad} = \frac{\quad}{63}$

10. $\frac{3}{5} = \frac{\quad}{\quad} = \frac{\quad}{15}$

11. $\frac{1}{6} = \frac{\quad}{\quad} = \frac{\quad}{12}$

12. $\frac{1}{10} = \frac{\quad}{\quad} = \frac{\quad}{90}$

13. $\frac{9}{10} = \frac{\quad}{\quad} = \frac{\quad}{60}$

14. $5 = \frac{\quad}{\quad} = \frac{\quad}{2}$

15. $\frac{7}{9} = \frac{\quad}{\quad} = \frac{\quad}{27}$

16. $\frac{5}{7} = \frac{\quad}{\quad} = \frac{\quad}{28}$

17. $\frac{2}{9} = \frac{\quad}{\quad} = \frac{\quad}{27}$

18. $\frac{7}{8} = \frac{\quad}{\quad} = \frac{\quad}{72}$

19. $9 = \frac{\quad}{\quad} = \frac{\quad}{4}$

20. $\frac{4}{7} = \frac{\quad}{\quad} = \frac{\quad}{14}$

Exercice n° 2 Comparer les fractions suivantes.

1. $\frac{5}{14} \dots\dots\dots \frac{1}{7}$

2. $\frac{2}{5} \dots\dots\dots \frac{10}{20}$

3. $\frac{1}{4} \dots\dots\dots \frac{3}{16}$

4. $\frac{2}{7} \dots\dots\dots \frac{6}{35}$

5. $\frac{1}{3} \dots\dots\dots \frac{7}{12}$

6. $\frac{8}{9} \dots\dots\dots \frac{30}{36}$

7. $\frac{15}{24} \dots\dots\dots \frac{3}{4}$

8. $\frac{1}{10} \dots\dots\dots \frac{10}{110}$

9. $\frac{5}{6} \dots\dots\dots \frac{18}{24}$

10. $\frac{6}{7} \dots\dots\dots \frac{33}{42}$

11. $\frac{3}{8} \dots\dots\dots \frac{35}{88}$

12. $\frac{49}{72} \dots\dots\dots \frac{5}{8}$

13. $\frac{49}{70} \dots\dots\dots \frac{5}{7}$

14. $\frac{46}{55} \dots\dots\dots \frac{4}{5}$

15. $\frac{1}{6} \dots\dots\dots \frac{7}{24}$

16. $\frac{2}{9} \dots\dots\dots \frac{3}{27}$

17. $\frac{2}{3} \dots\dots\dots \frac{18}{30}$

18. $\frac{3}{7} \dots\dots\dots \frac{24}{49}$

19. $\frac{33}{45} \dots\dots\dots \frac{7}{9}$

20. $\frac{1}{8} \dots\dots\dots \frac{6}{80}$

Exercice n° 3 Ranger les nombres suivants dans l'ordre croissant.

1. $\frac{19}{9}$; 1 ; $\frac{4}{6}$; $\frac{4}{18}$; $\frac{1}{2}$

2. 1 ; $\frac{3}{18}$; $\frac{5}{2}$; $\frac{5}{9}$; $\frac{11}{6}$

3. $\frac{6}{4}$; $\frac{8}{6}$; $\frac{7}{12}$; 3 ; $\frac{11}{3}$

4. $\frac{7}{4}$; $\frac{11}{2}$; $\frac{7}{3}$; 1 ; $\frac{7}{12}$

5. 1 ; $\frac{9}{2}$; $\frac{10}{3}$; $\frac{1}{9}$; $\frac{11}{18}$

6. $\frac{6}{30}$; 3 ; $\frac{3}{2}$; $\frac{7}{3}$; $\frac{8}{5}$

7. $\frac{3}{5}$; $\frac{11}{2}$; $\frac{11}{6}$; $\frac{6}{30}$; 2

8. 3 ; $\frac{5}{2}$; $\frac{3}{5}$; $\frac{3}{20}$; $\frac{7}{10}$

9. $\frac{10}{6}$; $\frac{8}{3}$; 3 ; $\frac{2}{18}$; $\frac{9}{6}$

10. 1 ; $\frac{2}{20}$; $\frac{11}{2}$; $\frac{8}{10}$; $\frac{3}{4}$

Exercice n° 4 Simplifier les fractions suivantes.

1. $\frac{45}{63} = \text{-----} = \text{---}$

2. $\frac{2}{6} = \text{-----} = \text{---}$

3. $\frac{30}{54} = \text{-----} = \text{---}$

4. $\frac{9}{36} = \text{-----} = \text{---}$

5. $\frac{99}{110} = \text{-----} = \text{---}$

6. $\frac{27}{90} = \text{-----} = \text{---}$

7. $\frac{12}{30} = \text{-----} = \text{---}$

8. $\frac{56}{64} = \text{-----} = \text{---}$

9. $\frac{11}{55} = \text{-----} = \text{---}$

10. $\frac{14}{18} = \text{-----} = \text{---}$

11. $\frac{50}{80} = \text{-----} = \text{---}$

12. $\frac{70}{100} = \text{-----} = \text{---}$

13. $\frac{2}{4} = \text{-----} = \text{---}$

14. $\frac{8}{48} = \text{-----} = \text{---}$

15. $\frac{36}{42} = \text{-----} = \text{---}$

16. $\frac{36}{81} = \text{-----} = \text{---}$

17. $\frac{18}{42} = \text{-----} = \text{---}$

18. $\frac{2}{16} = \text{-----} = \text{---}$

19. $\frac{14}{63} = \text{-----} = \text{---}$

20. $\frac{35}{42} = \text{-----} = \text{---}$

Exercice n° 5 Calculer et donner le résultat sous la forme d'une fraction simplifiée

1. $\frac{6}{2} + \frac{16}{10} =$

2. $\frac{7}{5} - \frac{54}{40} =$

3. $\frac{6}{3} + \frac{15}{24} =$

4. $\frac{18}{18} - \frac{4}{9} =$

5. $\frac{15}{10} - \frac{4}{5} =$

6. $\frac{8}{18} + \frac{9}{2} =$

7. $\frac{99}{99} - \frac{5}{9} =$

8. $\frac{17}{28} + \frac{7}{4} =$

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

10. $\frac{2}{7} + \frac{15}{56} =$

11. $\frac{19}{22} + \frac{6}{2} =$

12. $\frac{2}{3} - \frac{13}{21} =$

13. $\frac{70}{48} - \frac{3}{6} =$

14. $\frac{13}{15} + \frac{9}{3} =$

15. $\frac{2}{8} + \frac{9}{56} =$

16. $\frac{25}{25} - \frac{4}{5} =$

17. $\frac{4}{2} + \frac{11}{10} =$

18. $\frac{9}{7} - \frac{8}{14} =$

19. $\frac{75}{63} - \frac{1}{7} =$

20. $\frac{2}{6} + \frac{11}{60} =$

Exercice n° 1

1. $\frac{5}{6} = \frac{5 \times 5}{6 \times 5} = \frac{25}{30}$

2. $\frac{1}{4} = \frac{1 \times 8}{4 \times 8} = \frac{8}{32}$

3. $\frac{3}{8} = \frac{3 \times 3}{8 \times 3} = \frac{9}{24}$

4. $5 = \frac{5}{1} = \frac{5 \times 3}{1 \times 3} = \frac{15}{3}$

5. $\frac{4}{9} = \frac{4 \times 10}{9 \times 10} = \frac{40}{90}$

6. $1 = \frac{1}{1} = \frac{1 \times 7}{1 \times 7} = \frac{7}{7}$

7. $\frac{1}{9} = \frac{1 \times 7}{9 \times 7} = \frac{7}{63}$

8. $\frac{1}{5} = \frac{1 \times 3}{5 \times 3} = \frac{3}{15}$

9. $\frac{3}{7} = \frac{3 \times 9}{7 \times 9} = \frac{27}{63}$

10. $\frac{3}{5} = \frac{3 \times 3}{5 \times 3} = \frac{9}{15}$

11. $\frac{1}{6} = \frac{1 \times 2}{6 \times 2} = \frac{2}{12}$

12. $\frac{1}{10} = \frac{1 \times 9}{10 \times 9} = \frac{9}{90}$

13. $\frac{9}{10} = \frac{9 \times 6}{10 \times 6} = \frac{54}{60}$

14. $5 = \frac{5}{1} = \frac{5 \times 2}{1 \times 2} = \frac{10}{2}$

15. $\frac{7}{9} = \frac{7 \times 3}{9 \times 3} = \frac{21}{27}$

16. $\frac{5}{7} = \frac{5 \times 4}{7 \times 4} = \frac{20}{28}$

17. $\frac{2}{9} = \frac{2 \times 3}{9 \times 3} = \frac{6}{27}$

18. $\frac{7}{8} = \frac{7 \times 9}{8 \times 9} = \frac{63}{72}$

19. $9 = \frac{9}{1} = \frac{9 \times 4}{1 \times 4} = \frac{36}{4}$

20. $\frac{4}{7} = \frac{4 \times 2}{7 \times 2} = \frac{8}{14}$

Exercice n° 2

1. $\frac{1}{7} = \frac{1 \times 2}{7 \times 2} = \frac{2}{14}$ et $\frac{5}{14} > \frac{2}{14}$ donc $\frac{5}{14} > \frac{1}{7}$

2. $\frac{2}{5} = \frac{2 \times 4}{5 \times 4} = \frac{8}{20}$ et $\frac{8}{20} < \frac{10}{20}$ donc $\frac{2}{5} < \frac{10}{20}$

3. $\frac{1}{4} = \frac{1 \times 4}{4 \times 4} = \frac{4}{16}$ et $\frac{4}{16} > \frac{3}{16}$ donc $\frac{1}{4} > \frac{3}{16}$

4. $\frac{2}{7} = \frac{2 \times 5}{7 \times 5} = \frac{10}{35}$ et $\frac{10}{35} > \frac{6}{35}$ donc $\frac{2}{7} > \frac{6}{35}$

5. $\frac{1}{3} = \frac{1 \times 4}{3 \times 4} = \frac{4}{12}$ et $\frac{4}{12} < \frac{7}{12}$ donc $\frac{1}{3} < \frac{7}{12}$

6. $\frac{8}{9} = \frac{8 \times 4}{9 \times 4} = \frac{32}{36}$ et $\frac{32}{36} > \frac{30}{36}$ donc $\frac{8}{9} > \frac{30}{36}$

7. $\frac{3}{4} = \frac{3 \times 6}{4 \times 6} = \frac{18}{24}$ et $\frac{15}{24} < \frac{18}{24}$ donc $\frac{15}{24} < \frac{3}{4}$

8. $\frac{1}{10} = \frac{1 \times 11}{10 \times 11} = \frac{11}{110}$ et $\frac{11}{110} > \frac{10}{110}$ donc $\frac{1}{10} > \frac{10}{110}$

9. $\frac{5}{6} = \frac{5 \times 4}{6 \times 4} = \frac{20}{24}$ et $\frac{20}{24} > \frac{18}{24}$ donc $\frac{5}{6} > \frac{18}{24}$

10. $\frac{6}{7} = \frac{6 \times 6}{7 \times 6} = \frac{36}{42}$ et $\frac{36}{42} > \frac{33}{42}$ donc $\frac{6}{7} > \frac{33}{42}$
11. $\frac{3}{8} = \frac{3 \times 11}{8 \times 11} = \frac{33}{88}$ et $\frac{33}{88} < \frac{35}{88}$ donc $\frac{3}{8} < \frac{35}{88}$
12. $\frac{5}{8} = \frac{5 \times 9}{8 \times 9} = \frac{45}{72}$ et $\frac{49}{72} > \frac{45}{72}$ donc $\frac{49}{72} > \frac{5}{8}$
13. $\frac{5}{7} = \frac{5 \times 10}{7 \times 10} = \frac{50}{70}$ et $\frac{49}{70} < \frac{50}{70}$ donc $\frac{49}{70} < \frac{5}{7}$
14. $\frac{4}{5} = \frac{4 \times 11}{5 \times 11} = \frac{44}{55}$ et $\frac{46}{55} > \frac{44}{55}$ donc $\frac{46}{55} > \frac{4}{5}$
15. $\frac{1}{6} = \frac{1 \times 4}{6 \times 4} = \frac{4}{24}$ et $\frac{4}{24} < \frac{7}{24}$ donc $\frac{1}{6} < \frac{7}{24}$
16. $\frac{2}{9} = \frac{2 \times 3}{9 \times 3} = \frac{6}{27}$ et $\frac{6}{27} > \frac{3}{27}$ donc $\frac{2}{9} > \frac{3}{27}$
17. $\frac{2}{3} = \frac{2 \times 10}{3 \times 10} = \frac{20}{30}$ et $\frac{20}{30} > \frac{18}{30}$ donc $\frac{2}{3} > \frac{18}{30}$
18. $\frac{3}{7} = \frac{3 \times 7}{7 \times 7} = \frac{21}{49}$ et $\frac{21}{49} < \frac{24}{49}$ donc $\frac{3}{7} < \frac{24}{49}$
19. $\frac{7}{9} = \frac{7 \times 5}{9 \times 5} = \frac{35}{45}$ et $\frac{33}{45} < \frac{35}{45}$ donc $\frac{33}{45} < \frac{7}{9}$
20. $\frac{1}{8} = \frac{1 \times 10}{8 \times 10} = \frac{10}{80}$ et $\frac{10}{80} > \frac{6}{80}$ donc $\frac{1}{8} > \frac{6}{80}$

Exercice n° 3

$$1. \frac{19}{9} = \frac{19 \times 2}{9 \times 2} = \frac{38}{18}$$

$$1 = \frac{18}{18}$$

$$\frac{4}{6} = \frac{4 \times 3}{6 \times 3} = \frac{12}{18}$$

$$\frac{4}{18}$$

$$\frac{1}{2} = \frac{1 \times 9}{2 \times 9} = \frac{9}{18}$$

$$\frac{4}{18} < \frac{9}{18} < \frac{12}{18} < \frac{18}{18} < \frac{38}{18}$$

$$\text{Finalement : } \frac{4}{18} < \frac{1}{2} < \frac{4}{6} < 1 < \frac{19}{9}$$

$$2. \quad 1 = \frac{18}{18}$$

$$\frac{3}{18}$$

$$\frac{5}{2} = \frac{5 \times 9}{2 \times 9} = \frac{45}{18}$$

$$\frac{5}{9} = \frac{5 \times 2}{9 \times 2} = \frac{10}{18}$$

$$\frac{11}{6} = \frac{11 \times 3}{6 \times 3} = \frac{33}{18}$$

$$\frac{3}{18} < \frac{10}{18} < \frac{18}{18} < \frac{33}{18} < \frac{45}{18}$$

$$\text{Finalement : } \frac{3}{18} < \frac{5}{9} < 1 < \frac{11}{6} < \frac{5}{2}$$

$$3. \quad \frac{6}{4} = \frac{6 \times 3}{4 \times 3} = \frac{18}{12}$$

$$\frac{8}{6} = \frac{8 \times 2}{6 \times 2} = \frac{16}{12}$$

$$\frac{7}{12}$$

$$3 = \frac{36}{12}$$

$$\frac{11}{3} = \frac{11 \times 4}{3 \times 4} = \frac{44}{12}$$

$$\frac{7}{12} < \frac{16}{12} < \frac{18}{12} < \frac{36}{12} < \frac{44}{12}$$

$$\text{Finalement : } \frac{7}{12} < \frac{8}{6} < \frac{6}{4} < 3 < \frac{11}{3}$$

$$4. \quad \frac{7}{4} = \frac{7 \times 3}{4 \times 3} = \frac{21}{12}$$

$$\frac{11}{2} = \frac{11 \times 6}{2 \times 6} = \frac{66}{12}$$

$$\frac{7}{3} = \frac{7 \times 4}{3 \times 4} = \frac{28}{12}$$

$$1 = \frac{12}{12}$$

$$\frac{7}{12}$$

$$\frac{7}{12} < \frac{12}{12} < \frac{21}{12} < \frac{28}{12} < \frac{66}{12}$$

$$\text{Finalement : } \frac{7}{12} < 1 < \frac{7}{4} < \frac{7}{3} < \frac{11}{2}$$

$$5. \ 1 = \frac{18}{18}$$

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

$$\frac{10}{3} = \frac{10 \times 6}{3 \times 6} = \frac{60}{18}$$

$$\frac{1}{9} = \frac{1 \times 2}{9 \times 2} = \frac{2}{18}$$

$$\frac{11}{18}$$

$$\frac{2}{18} < \frac{11}{18} < \frac{18}{18} < \frac{60}{18} < \frac{81}{18}$$

$$\text{Finalement : } \frac{1}{9} < \frac{11}{18} < 1 < \frac{10}{3} < \frac{9}{2}$$

$$6. \ \frac{6}{30}$$

$$3 = \frac{90}{30}$$

$$\frac{3}{2} = \frac{3 \times 15}{2 \times 15} = \frac{45}{30}$$

$$\frac{7}{3} = \frac{7 \times 10}{3 \times 10} = \frac{70}{30}$$

$$\frac{8}{5} = \frac{8 \times 6}{5 \times 6} = \frac{48}{30}$$

$$\frac{6}{30} < \frac{45}{30} < \frac{48}{30} < \frac{70}{30} < \frac{90}{30}$$

$$\text{Finalement : } \frac{6}{30} < \frac{3}{2} < \frac{8}{5} < \frac{7}{3} < 3$$

$$7. \ \frac{3}{5} = \frac{3 \times 6}{5 \times 6} = \frac{18}{30}$$

$$\frac{11}{2} = \frac{11 \times 15}{2 \times 15} = \frac{165}{30}$$

$$\frac{11}{6} = \frac{11 \times 5}{6 \times 5} = \frac{55}{30}$$

$$\frac{6}{30}$$

$$2 = \frac{60}{30}$$

$$\frac{6}{30} < \frac{18}{30} < \frac{55}{30} < \frac{60}{30} < \frac{165}{30}$$

$$\text{Finalement : } \frac{6}{30} < \frac{3}{5} < \frac{11}{6} < 2 < \frac{11}{2}$$

$$8. \quad 3 = \frac{60}{20}$$

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

$$\frac{3}{5} = \frac{3 \times 4}{5 \times 4} = \frac{12}{20}$$

$$\frac{3}{20}$$

$$\frac{7}{10} = \frac{7 \times 2}{10 \times 2} = \frac{14}{20}$$

$$\frac{3}{20} < \frac{12}{20} < \frac{14}{20} < \frac{50}{20} < \frac{60}{20}$$

$$\text{Finalement : } \frac{3}{20} < \frac{3}{5} < \frac{7}{10} < \frac{5}{2} < 3$$

$$9. \quad \frac{10}{6} = \frac{10 \times 3}{6 \times 3} = \frac{30}{18}$$

$$\frac{8}{3} = \frac{8 \times 6}{3 \times 6} = \frac{48}{18}$$

$$3 = \frac{54}{18}$$

$$\frac{2}{18}$$

$$\frac{9}{6} = \frac{9 \times 3}{6 \times 3} = \frac{27}{18}$$

$$\frac{2}{18} < \frac{27}{18} < \frac{30}{18} < \frac{48}{18} < \frac{54}{18}$$

$$\text{Finalement : } \frac{2}{18} < \frac{9}{6} < \frac{10}{6} < \frac{8}{3} < 3$$

$$10. \quad 1 = \frac{20}{20}$$

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

$$\frac{11}{2} = \frac{11 \times 10}{2 \times 10} = \frac{110}{20}$$

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

$$\frac{3}{4} = \frac{3 \times 5}{4 \times 5} = \frac{15}{20}$$

$$\frac{2}{20} < \frac{15}{20} < \frac{16}{20} < \frac{20}{20} < \frac{110}{20}$$

$$\text{Finalement : } \frac{2}{20} < \frac{3}{4} < \frac{8}{10} < 1 < \frac{11}{2}$$

Exercice n° 4

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

$$2. \frac{2}{6} = \frac{2 \times 1}{2 \times 3} = \frac{1}{3}$$

$$3. \frac{30}{54} = \frac{6 \times 5}{6 \times 9} = \frac{5}{9}$$

$$4. \frac{9}{36} = \frac{9 \times 1}{9 \times 4} = \frac{1}{4}$$

$$5. \frac{99}{110} = \frac{11 \times 9}{11 \times 10} = \frac{9}{10}$$

$$6. \frac{27}{90} = \frac{9 \times 3}{9 \times 10} = \frac{3}{10}$$

$$7. \frac{12}{30} = \frac{6 \times 2}{6 \times 5} = \frac{2}{5}$$

$$8. \frac{56}{64} = \frac{8 \times 7}{8 \times 8} = \frac{7}{8}$$

$$9. \frac{11}{55} = \frac{11 \times 1}{11 \times 5} = \frac{1}{5}$$

$$10. \frac{14}{18} = \frac{2 \times 7}{2 \times 9} = \frac{7}{9}$$

$$11. \frac{50}{80} = \frac{10 \times 5}{10 \times 8} = \frac{5}{8}$$

$$12. \frac{70}{100} = \frac{10 \times 7}{10 \times 10} = \frac{7}{10}$$

$$13. \frac{2}{4} = \frac{2 \times 1}{2 \times 2} = \frac{1}{2}$$

$$14. \frac{8}{48} = \frac{8 \times 1}{8 \times 6} = \frac{1}{6}$$

$$15. \frac{36}{42} = \frac{6 \times 6}{6 \times 7} = \frac{6}{7}$$

$$16. \frac{36}{81} = \frac{9 \times 4}{9 \times 9} = \frac{4}{9}$$

$$17. \frac{18}{42} = \frac{6 \times 3}{6 \times 7} = \frac{3}{7}$$

$$18. \frac{2}{16} = \frac{2 \times 1}{2 \times 8} = \frac{1}{8}$$

$$19. \frac{14}{63} = \frac{7 \times 2}{7 \times 9} = \frac{2}{9}$$

$$20. \frac{35}{42} = \frac{7 \times 5}{7 \times 6} = \frac{5}{6}$$

Exercice n° 5

1. $\frac{6}{2} + \frac{16}{10} = \frac{6 \times 5}{2 \times 5} + \frac{16}{10} = \frac{30}{10} + \frac{16}{10} = \frac{30 + 16}{10} = \frac{46}{10} = \frac{23 \times 2}{5 \times 2} = \frac{23}{5}$
2. $\frac{7}{5} - \frac{54}{40} = \frac{7 \times 8}{5 \times 8} - \frac{54}{40} = \frac{56}{40} - \frac{54}{40} = \frac{56 - 54}{40} = \frac{2}{40} = \frac{1 \times 2}{20 \times 2} = \frac{1}{20}$
3. $\frac{6}{3} + \frac{15}{24} = \frac{6 \times 8}{3 \times 8} + \frac{15}{24} = \frac{48}{24} + \frac{15}{24} = \frac{48 + 15}{24} = \frac{63}{24} = \frac{21 \times 3}{8 \times 3} = \frac{21}{8}$
4. $\frac{18}{18} - \frac{4}{9} = \frac{18}{18} - \frac{4 \times 2}{9 \times 2} = \frac{18}{18} - \frac{8}{18} = \frac{18 - 8}{18} = \frac{10}{18} = \frac{5 \times 2}{9 \times 2} = \frac{5}{9}$
5. $\frac{15}{10} - \frac{4}{5} = \frac{15}{10} - \frac{4 \times 2}{5 \times 2} = \frac{15}{10} - \frac{8}{10} = \frac{15 - 8}{10} = \frac{7}{10}$
6. $\frac{8}{18} + \frac{9}{2} = \frac{8}{18} + \frac{9 \times 9}{2 \times 9} = \frac{8}{18} + \frac{81}{18} = \frac{8 + 81}{18} = \frac{89}{18}$
7. $\frac{99}{99} - \frac{5}{9} = \frac{99}{99} - \frac{5 \times 11}{9 \times 11} = \frac{99}{99} - \frac{55}{99} = \frac{99 - 55}{99} = \frac{44}{99} = \frac{4 \times 11}{9 \times 11} = \frac{4}{9}$
8. $\frac{17}{28} + \frac{7}{4} = \frac{17}{28} + \frac{7 \times 7}{4 \times 7} = \frac{17}{28} + \frac{49}{28} = \frac{17 + 49}{28} = \frac{66}{28} = \frac{33 \times 2}{14 \times 2} = \frac{33}{14}$
9. $\frac{14}{14} - \frac{4}{7} = \frac{14}{14} - \frac{4 \times 2}{7 \times 2} = \frac{14}{14} - \frac{8}{14} = \frac{14 - 8}{14} = \frac{6}{14} = \frac{3 \times 2}{7 \times 2} = \frac{3}{7}$
10. $\frac{2}{7} + \frac{15}{56} = \frac{2 \times 8}{7 \times 8} + \frac{15}{56} = \frac{16}{56} + \frac{15}{56} = \frac{16 + 15}{56} = \frac{31}{56}$
11. $\frac{19}{22} + \frac{6}{2} = \frac{19}{22} + \frac{6 \times 11}{2 \times 11} = \frac{19}{22} + \frac{66}{22} = \frac{19 + 66}{22} = \frac{85}{22}$
12. $\frac{2}{3} - \frac{13}{21} = \frac{2 \times 7}{3 \times 7} - \frac{13}{21} = \frac{14}{21} - \frac{13}{21} = \frac{14 - 13}{21} = \frac{1}{21}$
13. $\frac{70}{48} - \frac{3}{6} = \frac{70}{48} - \frac{3 \times 8}{6 \times 8} = \frac{70}{48} - \frac{24}{48} = \frac{70 - 24}{48} = \frac{46}{48} = \frac{23 \times 2}{24 \times 2} = \frac{23}{24}$
14. $\frac{13}{15} + \frac{9}{3} = \frac{13}{15} + \frac{9 \times 5}{3 \times 5} = \frac{13}{15} + \frac{45}{15} = \frac{13 + 45}{15} = \frac{58}{15}$
15. $\frac{2}{8} + \frac{9}{56} = \frac{2 \times 7}{8 \times 7} + \frac{9}{56} = \frac{14}{56} + \frac{9}{56} = \frac{14 + 9}{56} = \frac{23}{56}$
16. $\frac{25}{25} - \frac{4}{5} = \frac{25}{25} - \frac{4 \times 5}{5 \times 5} = \frac{25}{25} - \frac{20}{25} = \frac{25 - 20}{25} = \frac{5}{25} = \frac{1 \times 5}{5 \times 5} = \frac{1}{5}$
17. $\frac{4}{2} + \frac{11}{10} = \frac{4 \times 5}{2 \times 5} + \frac{11}{10} = \frac{20}{10} + \frac{11}{10} = \frac{20 + 11}{10} = \frac{31}{10}$
18. $\frac{9}{7} - \frac{8}{14} = \frac{9 \times 2}{7 \times 2} - \frac{8}{14} = \frac{18}{14} - \frac{8}{14} = \frac{18 - 8}{14} = \frac{10}{14} = \frac{5 \times 2}{7 \times 2} = \frac{5}{7}$
19. $\frac{75}{63} - \frac{1}{7} = \frac{75}{63} - \frac{1 \times 9}{7 \times 9} = \frac{75}{63} - \frac{9}{63} = \frac{75 - 9}{63} = \frac{66}{63} = \frac{22 \times 3}{21 \times 3} = \frac{22}{21}$
20. $\frac{2}{6} + \frac{11}{60} = \frac{2 \times 10}{6 \times 10} + \frac{11}{60} = \frac{20}{60} + \frac{11}{60} = \frac{20 + 11}{60} = \frac{31}{60}$