Addition und Subtraktion von Brüchen mit ungleichem Nenner

Lösung:

1) $\dfrac{3}{5} + \dfrac{4}{9} = \dfrac{3 \cdot 9}{5 \cdot 9} + \dfrac{4 \cdot 5}{9 \cdot 5} = \dfrac{27}{45} + \dfrac{20}{45} = \dfrac{47}{45}$

1) $\dfrac{3}{5} + \dfrac{4}{9} = \dfrac{27}{45} + \dfrac{20}{45} = \dfrac{47}{45}$ ___

2) $\dfrac{6}{5} + \dfrac{3}{7} = \dfrac{6 \cdot 7}{5 \cdot 7} + \dfrac{3 \cdot 5}{7 \cdot 5} = \dfrac{42}{35} + \dfrac{15}{35} = \boxed{}$

2) $\dfrac{6}{5} + \dfrac{3}{7} = \dfrac{42}{35} + \dfrac{15}{35} = \dfrac{57}{35}$ ___

3) $\dfrac{9}{7} + \dfrac{8}{4} = \dfrac{9 \cdot 4}{7 \cdot 4} + \dfrac{8 \cdot 7}{4 \cdot 7} = \dfrac{36}{} + \dfrac{56}{} = \boxed{}$

3) $\dfrac{9}{7} + \dfrac{8}{4} = \dfrac{36}{28} + \dfrac{56}{28} = \dfrac{92}{28} = \dfrac{23}{7}$

4) $\dfrac{8}{5} + \dfrac{9}{3} = \dfrac{8 \cdot 3}{5 \cdot 3} + \dfrac{9 \cdot 5}{3 \cdot 5} = \boxed{} + \boxed{} = \boxed{}$

4) $\dfrac{8}{5} + \dfrac{9}{3} = \dfrac{24}{15} + \dfrac{45}{15} = \dfrac{69}{15} = \dfrac{23}{5}$

5) $\dfrac{7}{2} + \dfrac{8}{7} = \dfrac{}{2 \cdot 7} + \dfrac{}{7 \cdot 2} = \boxed{} + \boxed{} = \boxed{}$

5) $\dfrac{7}{2} + \dfrac{8}{7} = \dfrac{49}{14} + \dfrac{16}{14} = \dfrac{65}{14}$ ___

6) $\dfrac{2}{8} + \dfrac{4}{3} = \boxed{} + \boxed{} = \boxed{} + \boxed{} = \boxed{}$

6) $\dfrac{2}{8} + \dfrac{4}{3} = \dfrac{6}{24} + \dfrac{32}{24} = \dfrac{38}{24} = \dfrac{19}{12}$

7) $\dfrac{4}{5} + \dfrac{9}{10} = \boxed{} + \boxed{} = \boxed{} + \boxed{} = \boxed{}$

7) $\dfrac{4}{5} + \dfrac{9}{10} = \dfrac{8}{10} + \dfrac{9}{10} = \dfrac{17}{10}$ ___

8) $\dfrac{8}{9} + \dfrac{4}{5} = \boxed{} + \boxed{} = \boxed{} + \boxed{} = \boxed{}$

8) $\dfrac{8}{9} + \dfrac{4}{5} = \dfrac{40}{45} + \dfrac{36}{45} = \dfrac{76}{45}$ ___

9) $\dfrac{8}{4} + \dfrac{6}{8} = \boxed{} + \boxed{} = \boxed{} + \boxed{} = \boxed{}$

9) $\dfrac{8}{4} + \dfrac{6}{8} = \dfrac{16}{8} + \dfrac{6}{8} = \dfrac{22}{8} = \dfrac{11}{4}$

10) $\dfrac{9}{2} + \dfrac{5}{6} = \boxed{} + \boxed{} = \boxed{} + \boxed{} = \boxed{}$

10) $\dfrac{9}{2} + \dfrac{5}{6} = \dfrac{27}{6} + \dfrac{5}{6} = \dfrac{32}{6} = \dfrac{16}{3}$

11) $\dfrac{7}{8} - \dfrac{2}{4} = \dfrac{7 \cdot 1}{8 \cdot 1} - \dfrac{2 \cdot 2}{4 \cdot 2} = \dfrac{7}{8} - \dfrac{4}{8} = \dfrac{3}{8}$

11) $\dfrac{7}{8} - \dfrac{2}{4} = \dfrac{7}{8} - \dfrac{4}{8} = \dfrac{3}{8}$ ___

12) $\dfrac{9}{10} - \dfrac{6}{9} = \boxed{} - \boxed{} = \boxed{} - \boxed{} = \boxed{}$

12) $\dfrac{9}{\#} - \dfrac{6}{9} = \dfrac{81}{90} - \dfrac{60}{90} = \dfrac{21}{90} = \dfrac{7}{30}$

13) $\dfrac{4}{8} - \dfrac{6}{8} = \boxed{} - \boxed{} = \boxed{} - \boxed{} = \boxed{}$

13) $\dfrac{4}{8} - \dfrac{6}{8} = \dfrac{4}{8} - \dfrac{6}{8} = \dfrac{-2}{8} = \dfrac{-1}{4}$

14) $\dfrac{6}{2} - \dfrac{5}{9} = \boxed{} - \boxed{} = \boxed{} - \boxed{} = \boxed{}$

14) $\dfrac{6}{2} - \dfrac{5}{9} = \dfrac{54}{18} - \dfrac{10}{18} = \dfrac{44}{18} = \dfrac{22}{9}$

15) $\dfrac{8}{9} - \dfrac{9}{10} = \boxed{} - \boxed{} = \boxed{} - \boxed{} = \boxed{}$

15) $\dfrac{8}{9} - \dfrac{9}{10} = \dfrac{80}{90} - \dfrac{81}{90} = \dfrac{-1}{90}$ ___

16) $\dfrac{6}{8} - \dfrac{5}{2} = \boxed{} - \boxed{} = \boxed{} - \boxed{} = \boxed{}$

16) $\dfrac{6}{8} - \dfrac{5}{2} = \dfrac{6}{8} - \dfrac{20}{8} = \dfrac{-14}{8} = \dfrac{-7}{4}$

17) $\dfrac{9}{3} - \dfrac{3}{7} = \boxed{} - \boxed{} = \boxed{} - \boxed{} = \boxed{}$

17) $\dfrac{9}{3} - \dfrac{3}{7} = \dfrac{63}{21} - \dfrac{9}{21} = \dfrac{54}{21} = \dfrac{18}{7}$

Brüche mit ungleichem Nenner werden addiert, indem man die Nenner
gleichnamig macht und dann die Zähler addiert.