

Espressioni con frazioni, addizioni e sottrazioni. Completati di soluzione guidata.
Evaluating Expressions Involving Fractions (Addition and Subtraction) – With solutions

1. $1 - \left(1 - \frac{1}{2}\right) - \left(1 - \frac{1}{3}\right)$ [soluzione](#)
2. $3 - \left\{\frac{5}{7} + \left[1 - \left(\frac{1}{2} - \frac{1}{7}\right)\right] - \left[2 - \left(\frac{1}{2} + \frac{1}{7}\right)\right]\right\}$ [soluzione](#)
3. $1 - \left\{\left[\left(\frac{5}{4} - 1\right) + \frac{3}{4}\right] - \left[\left(\frac{5}{4} - \frac{6}{7} - \frac{3}{14}\right) + \frac{6}{28} - \left(\frac{2}{21} + \frac{3}{7} - \frac{1}{3}\right)\right]\right\}$ $\left[\frac{17}{84}\right]$
[soluzione](#)
4. $\frac{13}{4} - \left[\frac{3}{2} + \frac{3}{4} - \left(1 - \frac{1}{2}\right) - \left(2 - \frac{3}{5}\right)\right]$ $\left[\frac{29}{10}\right]$
[soluzione](#)
5. $\frac{7}{2} - \frac{1}{4} + \frac{4}{3} - \left[1 - \left(\frac{1}{3} + \frac{3}{4} - \frac{1}{2}\right)\right] - \left(1 - \frac{3}{9}\right)$ $\left[\frac{7}{2}\right]$
[soluzione](#)
6. $\left(1 + \frac{1}{2}\right) - \left(1 + \frac{1}{4} - \frac{1}{3}\right) - \left(\frac{1}{6} - \frac{1}{12}\right) + \left(\frac{1}{5} + \frac{1}{10}\right)$ $\left[\frac{4}{5}\right]$
[soluzione](#)
7. $\left\{\frac{5}{4} + \left[\left(\frac{2}{3} + \frac{3}{5} - \frac{1}{6}\right) - \left(\frac{13}{10} - \frac{13}{12}\right)\right]\right\} + \frac{1}{5}$ $\left[\frac{7}{3}\right]$
[soluzione](#)
8. $\left(\frac{2}{3} + \frac{3}{4}\right) + \left(\frac{1}{2} + \frac{1}{3}\right) - \left(1 + \frac{1}{4}\right)$ $[1]$
[soluzione](#)
9. $\left(1 - \frac{1}{3}\right) + \left(1 - \frac{3}{4}\right) - \left(1 - \frac{5}{6}\right)$ $\left[\frac{5}{6}\right]$
[soluzione](#)
10. $\left(\frac{3}{4} + \frac{1}{2}\right) - \left(\frac{1}{2} - \frac{1}{3}\right) - \left(1 - \frac{1}{4}\right)$ $\left[\frac{1}{3}\right]$
[soluzione](#)
11. $\left(3 + \frac{1}{4}\right) - \left(\frac{9}{4} - \frac{5}{8} - \frac{1}{2}\right) - \left(1 - \frac{7}{8}\right)$ $[2]$
[soluzione](#)
12. $\left(2 - \frac{1}{5}\right) - \left[\left(\frac{3}{2} + \frac{4}{5} - \frac{1}{2}\right) - \left(\frac{9}{10} + \frac{1}{2} - 1\right)\right]$ $\left[\frac{2}{5}\right]$
[soluzione](#)
13. $\left(2 - \frac{1}{5}\right) - \left[\left(\frac{3}{2} + \frac{4}{5} - \frac{1}{4}\right) - \left(\frac{9}{10} + \frac{1}{2} - 1\right)\right]$ $\left[\frac{33}{20}\right]$

[soluzione](#)

14. $\left\{ \left(1 - \frac{1}{5}\right) - \left[1 - \left(\frac{1}{10} + \frac{1}{2}\right)\right] \right\} + \frac{3}{2}$ $\left[\frac{19}{10}\right]$
[soluzione](#)
15. $\left\{ \frac{1}{4} + \left(1 - \frac{1}{2}\right) - \left[1 - \left(\frac{5}{6} - \frac{2}{12}\right)\right] \right\} - \left(\frac{3}{4} - \frac{5}{8}\right)$ $\left[\frac{7}{24}\right]$
[soluzione](#)
16. $1 - \left\{ \frac{1}{2} - \left[\frac{2}{5} - \frac{1}{5} + 1 - \left(\frac{14}{7} - \frac{9}{6} + \frac{5}{10}\right) \right] \right\} - \left(1 - \frac{3}{10}\right)$ [0]
[soluzione](#)
17. $\left[\left(1 + \frac{6}{8}\right) + \frac{5}{12} - \frac{11}{12} \right] + \left(\frac{5}{3} - \frac{9}{12}\right) - \left(\frac{1}{2} + \frac{4}{6}\right)$ [1]
[soluzione](#)
18. $\left[\left(1 + \frac{1}{4} - \frac{1}{2}\right) + \left(1 + \frac{1}{6}\right) \right] + \left(\frac{5}{3} - \frac{1}{2} + 1\right)$ $\left[\frac{49}{12}\right]$
[soluzione](#)
19. $\frac{17}{14} - \left[\left(\frac{3}{2} + \frac{3}{4} - \frac{6}{7} + \frac{1}{14}\right) - \left(1 - \frac{1}{2}\right) \right] - \frac{1}{7}$ $\left[\frac{3}{28}\right]$
[soluzione](#)
20. $\left[\left(1 - \frac{8}{9}\right) - \frac{1}{18} \right] + \left(1 - \frac{1}{6}\right) - \left(1 - \frac{8}{9}\right)$ $\left[\frac{7}{9}\right]$
[soluzione](#)
21. $\left[\left(1 - \frac{3}{4}\right) + \left(1 + \frac{3}{4}\right) \right] + \left[\left(1 + \frac{1}{2}\right) - \frac{3}{4} + \left(1 - \frac{1}{4}\right) - 1 \right]$ $\left[\frac{5}{2}\right]$
[soluzione](#)
22. $\left[\left(1 + \frac{1}{4} - \frac{1}{2}\right) + \left(1 - \frac{1}{4}\right) \right] + \left[\left(1 - \frac{1}{5}\right) - \frac{3}{5} - \left(1 - \frac{4}{5}\right) \right] + 1$ $\left[\frac{5}{2}\right]$
[soluzione](#)
23. $\left(2 - \frac{1}{3}\right) - \left\{ \frac{7}{3} - \left[\frac{4}{3} - \left(\frac{3}{2} - \frac{1}{3}\right) \right] - 1 + \frac{1}{3} \right\}$ $\left[\frac{1}{6}\right]$
[soluzione](#)
24. $\left\{ \frac{5}{6} - \left[\frac{2}{3} + \left(\frac{3}{4} - \frac{4}{9}\right) - \left(1 - \frac{7}{12}\right) \right] + \left(1 - \frac{1}{4}\right) \right\} - 1$ $\left[\frac{1}{36}\right]$
[soluzione](#)
25. $\left[\left(1 - \frac{1}{4} - \frac{1}{2}\right) + \left(1 + \frac{1}{6}\right) \right] - \left(\frac{5}{3} - \frac{1}{3} - \frac{1}{6}\right)$ $\left[\frac{1}{4}\right]$
[soluzione](#)
26. $\left[\left(1 + \frac{1}{4} - \frac{1}{2}\right) + \left(1 + \frac{1}{6}\right) \right] - \left(\frac{5}{3} - \frac{1}{3} - \frac{1}{6}\right)$ $\left[\frac{3}{4}\right]$
[soluzione](#)
27. $1 - \left\{ \left[\left(1 + \frac{1}{5}\right) - \left(1 - \frac{4}{5}\right) \right] - \left[\left(1 + \frac{1}{4}\right) - \left(1 - \frac{1}{3}\right) \right] \right\}$ $\left[\frac{7}{12}\right]$
[soluzione](#)
28. $\left(\frac{1}{2} + \left(\frac{1}{2} + \left(\frac{1}{2} + \frac{1}{3} \right) \cdot \frac{4}{5} \right) \right) \cdot \frac{4}{9} - \frac{1}{2}$ $\left[\frac{13}{54}\right]$
[soluzione](#)

$$29. \quad 3 - \left\{ 1 + \left[1 - \left(\frac{2}{4} - \frac{7}{49} \right) \right] - \left[2 - \left(\frac{2}{4} + \frac{7}{49} \right) \right] \right\}$$

$\left[\frac{19}{7} \right]$
[soluzione](#)

Soluzioni

$$2 - \left(1 - \frac{1}{2}\right) - \left(1 - \frac{1}{3}\right)$$

Risolve prima le parentesi rotonde

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

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

$$\text{m.c.m.}(2, 3) = 6$$

$$= \frac{12 - 3 - 4}{6} = \frac{5}{6}$$

$$3 - \left\{ \frac{5}{7} + \left[1 - \left(\frac{2}{4} - \frac{7}{49} \right) \right] - \left[2 - \left(\frac{2}{4} + \frac{7}{49} \right) \right] \right\}$$

Semplifico $\frac{2}{4}$ in $\frac{1}{2}$ e $\frac{7}{49}$ in $\frac{1}{7}$

$$= 3 - \left\{ \frac{5}{7} + \left[1 - \left(\frac{1}{2} - \frac{1}{7} \right) \right] - \left[2 - \left(\frac{1}{2} + \frac{1}{7} \right) \right] \right\} =$$

m.c.m.(2, 7) = 14

$$= 3 - \left\{ \frac{5}{7} + \left[1 - \frac{7-2}{14} \right] - \left[2 - \frac{7+2}{14} \right] \right\} =$$

$$= 3 - \left\{ \frac{5}{7} + \left[1 - \frac{5}{14} \right] - \left[2 - \frac{9}{14} \right] \right\} =$$

$$= 3 - \left\{ \frac{5}{7} + \left[\frac{14-5}{14} \right] - \left[\frac{28-9}{14} \right] \right\} =$$

$$= 3 - \left\{ \frac{5}{7} + \frac{9}{14} - \frac{19}{14} \right\} =$$

m.c.m.(7, 14) = 14

$$= 3 - \frac{10 + 9 - 19}{14} =$$

$$= 3 - \frac{0}{14} =$$

Ricorda che non è possibile dividere per 0 ma che $0:14 = 0$

$$= 3 - 0 = 3$$

$$\begin{aligned}
 & 1 - \left\{ \left[\left(\frac{5}{4} - 1 \right) + \frac{3}{4} \right] - \left[\left(\frac{5}{4} - \frac{6}{7} - \frac{3}{14} \right) + \frac{6}{28} - \left(\frac{2}{21} + \frac{3}{7} - \frac{1}{3} \right) \right] \right\} = \\
 & = 1 - \left\{ \left[\frac{5-4}{4} + \frac{3}{4} \right] - \left[\left(\frac{35-24-6}{28} \right) + \frac{3}{14} - \left(\frac{2+9-7}{21} \right) \right] \right\} = \\
 & = 1 - \left\{ \left[\frac{1}{4} + \frac{3}{4} \right] - \left[\frac{5}{28} + \frac{3}{14} - \frac{4}{21} \right] \right\} = \\
 & = 1 - \left\{ \left[\frac{1+3}{4} \right] - \frac{15+18-16}{84} \right\} = \\
 & = 1 - \left\{ \frac{4}{4} - \frac{15+18-16}{84} \right\} = \\
 & = 1 - \left\{ 1 - \frac{17}{84} \right\} = \\
 & = 1 - \frac{84-17}{84} = \\
 & = 1 - \frac{67}{84} = \\
 & = \frac{84-67}{84} = \frac{17}{84}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{13}{4} - \left[\frac{3}{2} + \frac{3}{4} - \left(1 - \frac{1}{2} \right) - \left(2 - \frac{3}{5} \right) \right] = \\
 & = \frac{13}{4} - \left[\frac{3}{2} + \frac{3}{4} - \frac{2-1}{2} - \frac{10-3}{5} \right] = \\
 & = \frac{13}{4} - \left[\frac{3}{2} + \frac{3}{4} - \frac{1}{2} - \frac{7}{5} \right] = \\
 & = \frac{13}{4} - \left[\frac{30 + 15 - 10 - 28}{20} \right] = \\
 & = \frac{13}{4} - \frac{7}{20} = \\
 & = \frac{65 - 7}{20} = \\
 & = \frac{58}{20} = \frac{29}{10}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{7}{2} - \frac{1}{4} + \frac{4}{3} - \left[1 - \left(\frac{1}{3} + \frac{3}{4} - \frac{1}{2} \right) \right] - \left(1 - \frac{3}{9} \right) = \\
 & = \frac{7}{2} - \frac{1}{4} + \frac{4}{3} - \left[1 - \left(\frac{4+9-6}{12} \right) \right] - \left(\frac{9-3}{9} \right) = \\
 & = \frac{7}{2} - \frac{1}{4} + \frac{4}{3} - \left[1 - \frac{7}{12} \right] - \frac{6}{9} = \\
 & = \frac{7}{2} - \frac{1}{4} + \frac{4}{3} - \left[\frac{12-7}{12} \right] - \frac{2}{3} = \\
 & = \frac{7}{2} - \frac{1}{4} + \frac{4}{3} - \frac{5}{12} - \frac{2}{3} = \\
 & = \frac{42-3+16-5-8}{12} = \\
 & = \frac{42}{12} = \frac{7}{2}
 \end{aligned}$$

$$\begin{aligned}
 & \left(1 + \frac{1}{2} \right) - \left(1 + \frac{1}{4} - \frac{1}{3} \right) - \left(\frac{1}{6} - \frac{1}{12} \right) + \left(\frac{1}{5} + \frac{1}{10} \right) = \\
 & = \frac{2+1}{2} - \frac{12+3-4}{12} - \frac{2-1}{12} + \frac{2+1}{10} = \\
 & = \frac{3}{2} - \frac{11}{12} - \frac{1}{12} + \frac{3}{10} = \\
 & = \frac{90-55-5+183}{60} = \\
 & = \frac{48}{60} = \frac{8}{10} = \frac{4}{5}
 \end{aligned}$$

$$\begin{aligned}
 & \left\{ \frac{5}{4} + \left[\left(\frac{2}{3} + \frac{3}{5} - \frac{1}{6} \right) - \left(\frac{13}{10} - \frac{13}{12} \right) \right] \right\} + \frac{1}{5} = \\
 & = \left\{ \frac{5}{4} + \left[\frac{20 + 18 - 5}{30} - \frac{78 - 65}{60} \right] \right\} + \frac{1}{5} = \\
 & = \left\{ \frac{5}{4} + \left[\frac{33}{30} - \frac{13}{60} \right] \right\} + \frac{1}{5} = \\
 & = \left\{ \frac{5}{4} + \left[\frac{66 - 13}{60} \right] \right\} + \frac{1}{5} = \\
 & = \left\{ \frac{5}{4} + \frac{53}{60} \right\} + \frac{1}{5} = \\
 & = \frac{75 + 53}{60} + \frac{1}{5} = \\
 & = \frac{128}{60} + \frac{1}{5} = \\
 & = \frac{32}{15} + \frac{1}{5} = \\
 & = \frac{32 + 3}{15} = \frac{35}{15} = \frac{7}{3}
 \end{aligned}$$

$$\begin{aligned}
 & \left(\frac{2}{3} + \frac{3}{4} \right) + \left(\frac{1}{2} + \frac{1}{3} \right) - \left(1 + \frac{1}{4} \right) = \\
 & = \frac{8 + 9}{12} + \frac{3 + 2}{6} - \frac{4 + 1}{4} = \\
 & = \frac{17}{12} + \frac{5}{6} - \frac{5}{4} = \\
 & = \frac{17 + 10 - 15}{12} = \frac{12}{12} = 1
 \end{aligned}$$

$$\begin{aligned} & \left(1 - \frac{1}{3}\right) + \left(1 - \frac{3}{4}\right) - \left(1 - \frac{5}{6}\right) = \\ & = \frac{3-1}{3} + \frac{4-3}{3} - \frac{6-5}{6} = \\ & = \frac{2}{3} + \frac{1}{3} - \frac{1}{6} = \\ & = \frac{4+2-1}{6} = \frac{5}{6} \end{aligned}$$

$$\begin{aligned} & \left(\frac{3}{4} + \frac{1}{2}\right) - \left(\frac{1}{2} - \frac{1}{3}\right) - \left(1 - \frac{1}{4}\right) = \\ & = \frac{3+2}{4} - \frac{3-2}{6} - \frac{4-1}{4} = \\ & = \frac{5}{4} - \frac{1}{6} - \frac{3}{4} = \\ & = \frac{15-2-9}{12} = \frac{4}{12} = \frac{1}{3} \end{aligned}$$

$$\begin{aligned} & \left(3 + \frac{1}{4}\right) - \left(\frac{9}{4} - \frac{5}{8} - \frac{1}{2}\right) - \left(1 - \frac{7}{8}\right) = \\ & = \frac{12+1}{4} - \frac{18-5-3}{8} - \frac{8-7}{8} = \\ & = \frac{13}{4} - \frac{9}{8} - \frac{1}{8} = \\ & = \frac{26-9-1}{8} = \frac{16}{8} = 2 \end{aligned}$$

$$\begin{aligned}
 & \left(2 - \frac{1}{5}\right) - \left[\left(\frac{3}{2} + \frac{4}{5} - \frac{1}{2}\right) - \left(\frac{9}{10} + \frac{1}{2} - 1\right)\right] = \\
 & = \frac{10-1}{5} - \left[\frac{15+8-5}{10} - \frac{9+5-10}{10}\right] = \\
 & = \frac{9}{5} - \left[\frac{18}{10} - \frac{4}{10}\right] = \\
 & = \frac{9}{5} - \frac{14}{10} = \frac{9}{5} - \frac{7}{5} = \frac{2}{5}
 \end{aligned}$$

$$\begin{aligned}
 & \left(2 - \frac{1}{5}\right) - \left[\left(\frac{3}{2} + \frac{4}{5} - \frac{1}{4}\right) - \left(\frac{9}{10} + \frac{1}{2} - 1\right)\right] = \\
 & = \frac{10-1}{5} - \left[\frac{30+16-5}{20} - \frac{9+5-10}{10}\right] = \\
 & = \frac{9}{5} - \left[\frac{41}{20} - \frac{4}{10}\right] = \\
 & = \frac{9}{5} - \left[\frac{41-8}{20}\right] = \\
 & = \frac{9}{5} - \frac{33}{20} = \\
 & = \frac{36-33}{20} = \frac{3}{20}
 \end{aligned}$$

$$\begin{aligned}
 & \left\{ \left(1 - \frac{1}{5} \right) - \left[1 - \left(\frac{1}{10} + \frac{1}{2} \right) \right] \right\} + \frac{3}{2} = \\
 & = \left\{ \left(\frac{5-1}{5} \right) - \left[1 - \left(\frac{1+5}{10} \right) \right] \right\} + \frac{3}{2} = \\
 & = \left\{ \frac{4}{5} - \left[1 - \frac{6}{10} \right] \right\} + \frac{3}{2} = \\
 & = \left\{ \frac{4}{5} - \left[1 - \frac{3}{5} \right] \right\} + \frac{3}{2} = \\
 & = \left\{ \frac{4}{5} - \left[\frac{5-3}{5} \right] \right\} + \frac{3}{2} = \\
 & = \left\{ \frac{4}{5} - \frac{2}{5} \right\} + \frac{3}{2} = \\
 & = \frac{2}{5} + \frac{3}{2} = \\
 & = \frac{4+15}{10} = \frac{19}{10}
 \end{aligned}$$

$$\begin{aligned}
 & \left\{ \frac{1}{4} + \left(1 - \frac{1}{2} \right) - \left[1 - \left(\frac{5}{6} - \frac{2}{12} \right) \right] \right\} - \left(\frac{3}{4} - \frac{5}{8} \right) = \\
 & = \left\{ \frac{1}{4} + \left(\frac{2-1}{2} \right) - \left[1 - \left(\frac{10-2}{12} \right) \right] \right\} - \left(\frac{6-5}{8} \right) = \\
 & = \left\{ \frac{1}{4} + \frac{1}{2} - \left[1 - \frac{8}{12} \right] \right\} - \frac{1}{8} = \\
 & = \left\{ \frac{1}{4} + \frac{1}{2} - \frac{4}{12} \right\} - \frac{1}{8} = \\
 & = \left\{ \frac{3+6-4}{12} \right\} - \frac{1}{8} = \\
 & = \frac{5}{12} - \frac{1}{8} = \\
 & = \frac{10-3}{24} = \frac{7}{24}
 \end{aligned}$$

$$\begin{aligned} & 1 - \left\{ \frac{1}{2} - \left[\frac{2}{5} - \frac{1}{5} + 1 - \left(\frac{14}{7} - \frac{9}{6} + \frac{5}{10} \right) \right] \right\} - \left(1 - \frac{3}{10} \right) = \\ & = 1 - \left\{ \frac{1}{2} - \left[\frac{2}{5} - \frac{1}{5} + 1 - \left(2 - \frac{3}{2} + \frac{1}{2} \right) \right] \right\} - \left(\frac{10 - 3}{10} \right) = \\ & = 1 - \left\{ \frac{1}{2} - \left[\frac{2}{5} - \frac{1}{5} + 1 - \left(\frac{4 - 3 + 1}{2} \right) \right] \right\} - \frac{7}{10} = \\ & = 1 - \left\{ \frac{1}{2} - \left[\frac{2}{5} - \frac{1}{5} + 1 - \frac{2}{2} \right] \right\} - \frac{7}{10} = \\ & = 1 - \left\{ \frac{1}{2} - \left[\frac{2 - 1}{5} \right] \right\} - \frac{7}{10} = \\ & = 1 - \left\{ \frac{1}{2} - \frac{1}{5} \right\} - \frac{7}{10} = \\ & = 1 - \left\{ \frac{5 - 2}{10} \right\} - \frac{7}{10} = \\ & = 1 - \frac{3}{10} - \frac{7}{10} = \\ & = \frac{10 - 3 - 7}{10} = \\ & = \frac{0}{10} = 0 \end{aligned}$$

$$\begin{aligned}
 & \left[\left(1 + \frac{6}{8} \right) + \frac{5}{12} - \frac{11}{12} \right] + \left(\frac{5}{3} - \frac{9}{12} \right) - \left(\frac{1}{2} + \frac{4}{6} \right) = \\
 & = \left[\left(1 + \frac{3}{4} \right) + \frac{5}{12} - \frac{11}{12} \right] + \left(\frac{5}{3} - \frac{3}{4} \right) - \left(\frac{1}{2} + \frac{2}{3} \right) = \\
 & = \left[\frac{7}{4} + \frac{5}{12} - \frac{11}{12} \right] + \frac{20-9}{12} - \frac{3+4}{6} = \\
 & = \frac{21+5-11}{12} + \frac{11}{12} - \frac{7}{6} = \\
 & = \frac{15}{12} + \frac{11}{12} - \frac{7}{6} = \\
 & = \frac{15+11-14}{12} = \frac{12}{12} = 1
 \end{aligned}$$

$$\begin{aligned}
 & \left[\left(1 + \frac{1}{4} - \frac{1}{2} \right) + \left(1 + \frac{1}{6} \right) \right] + \left(\frac{5}{3} - \frac{1}{2} + 1 \right) = \\
 & = \left[\left(\frac{4+1-2}{4} \right) + \left(\frac{6+1}{6} \right) \right] + \left(\frac{10-3+6}{6} \right) = \\
 & = \left[\frac{3}{4} + \frac{7}{6} \right] + \frac{13}{6} = \\
 & = \frac{9+14}{12} + \frac{13}{6} = \\
 & = \frac{23}{12} + \frac{13}{6} = \\
 & = \frac{23+26}{12} = \frac{49}{12}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{17}{14} - \left[\left(\frac{3}{2} + \frac{3}{4} - \frac{6}{7} + \frac{1}{14} \right) - \left(1 - \frac{1}{2} \right) \right] - \frac{1}{7} = \\
 & = \frac{17}{14} - \left[\left(\frac{42 + 21 - 24 + 2}{28} \right) - \left(\frac{2 - 1}{2} \right) \right] - \frac{1}{7} = \\
 & = \frac{17}{14} - \left[\frac{41}{28} - \frac{1}{2} \right] - \frac{1}{7} = \\
 & = \frac{17}{14} - \left[\frac{41 - 14}{28} \right] - \frac{1}{7} = \\
 & = \frac{17}{14} - \frac{27}{28} - \frac{1}{7} = \\
 & = \frac{34 - 27 - 4}{28} = \frac{3}{28}
 \end{aligned}$$

$$\begin{aligned}
 & \left[\left(1 - \frac{8}{9} \right) - \frac{1}{18} \right] + \left(1 - \frac{1}{6} \right) - \left(1 - \frac{8}{9} \right) = \\
 & = \left[\left(\frac{9 - 8}{9} \right) - \frac{1}{18} \right] + \left(\frac{6 - 1}{6} \right) - \left(\frac{9 - 8}{9} \right) = \\
 & = \left[\frac{1}{9} - \frac{1}{18} \right] + \frac{5}{6} - \frac{1}{9} = \\
 & = \left[\frac{2 - 1}{18} \right] + \frac{5}{6} - \frac{1}{9} = \\
 & = \frac{1}{18} + \frac{5}{6} - \frac{1}{9} = \frac{1}{18} + \frac{5}{6} - \frac{1}{9} = \\
 & = \frac{1 + 15 - 2}{18} = \\
 & = \frac{14}{18} = \frac{7}{9}
 \end{aligned}$$

$$\begin{aligned}
 & \left[\left(1 - \frac{3}{4} \right) + \left(1 + \frac{3}{4} \right) \right] + \left[\left(1 + \frac{1}{2} \right) - \frac{3}{4} + \left(1 - \frac{1}{4} \right) - 1 \right] = \\
 & = \left[\frac{4-3}{4} + \frac{4+3}{4} \right] + \left[\frac{2+1}{2} - \frac{3}{4} + \left(\frac{4-1}{4} \right) - 1 \right] = \\
 & = \left[\frac{1}{4} + \frac{7}{4} \right] + \left[\frac{3}{2} - \frac{3}{4} + \frac{3}{4} - 1 \right] = \\
 & = 2 + \left[\frac{3}{2} - 1 \right] = \\
 & = 2 + \left[\frac{3-2}{2} \right] = \\
 & = 2 + \frac{1}{2} = \frac{5}{2}
 \end{aligned}$$

$$\begin{aligned}
 & \left[\left(1 + \frac{1}{4} - \frac{1}{2} \right) + \left(1 - \frac{1}{4} \right) \right] + \left[\left(1 - \frac{1}{5} \right) - \frac{3}{5} - \left(1 - \frac{4}{5} \right) \right] + 1 = \\
 & = \left[\frac{4+1-2}{4} + \frac{4-1}{4} \right] + \left[\frac{5-1}{5} - \frac{3}{5} - \left(\frac{5-4}{5} \right) \right] + 1 = \\
 & = \left[\frac{3}{4} + \frac{3}{4} \right] + \left[\frac{4}{5} - \frac{3}{5} - \frac{1}{5} \right] + 1 = \\
 & = \frac{6}{4} + \left[\frac{1}{5} - \frac{1}{5} \right] + 1 = \\
 & = \frac{3}{2} + 1 = \\
 & = \frac{3+2}{2} = \frac{5}{2}
 \end{aligned}$$

$$\begin{aligned}
 & \left(2 - \frac{1}{3} \right) - \left\{ \frac{7}{3} - \left[\frac{4}{3} - \left(\frac{3}{2} - \frac{1}{3} \right) \right] - 1 + \frac{1}{3} \right\} = \\
 & = \frac{6-1}{3} - \left\{ \frac{7}{3} - \left[\frac{4}{3} - \left(\frac{9-2}{6} \right) \right] - 1 + \frac{1}{3} \right\} = \\
 & = \frac{5}{3} - \left\{ \frac{7}{3} - \left[\frac{4}{3} - \frac{7}{6} \right] - 1 + \frac{1}{3} \right\} = \\
 & = \frac{5}{3} - \left\{ \frac{7}{3} - \left[\frac{8-7}{6} \right] - 1 + \frac{1}{3} \right\} = \\
 & = \frac{5}{3} - \left\{ \frac{7}{3} - \frac{1}{6} - 1 + \frac{1}{3} \right\} = \\
 & = \frac{5}{3} - \left\{ \frac{14-1-6+2}{6} \right\} = \\
 & = \frac{5}{3} - \frac{9}{6} = \frac{10-9}{6} = \frac{1}{6}
 \end{aligned}$$

$$\begin{aligned}
 & \left\{ \frac{5}{6} - \left[\frac{2}{3} + \left(\frac{3}{4} - \frac{4}{9} \right) - \left(1 - \frac{7}{12} \right) \right] + \left(1 - \frac{1}{4} \right) \right\} - 1 = \\
 & = \left\{ \frac{5}{6} - \left[\frac{2}{3} + \left(\frac{27-16}{36} \right) - \left(1 - \frac{7}{12} \right) \right] + \left(\frac{4-1}{4} \right) \right\} - 1 = \\
 & = \left\{ \frac{5}{6} - \left[\frac{2}{3} + \frac{11}{36} - \left(\frac{12-7}{12} \right) \right] + \frac{3}{4} \right\} - 1 = \\
 & = \left\{ \frac{5}{6} - \left[\frac{2}{3} + \frac{11}{36} - \frac{5}{12} \right] + \frac{3}{4} \right\} - 1 = \\
 & = \left\{ \frac{5}{6} - \left[\frac{24+11-15}{36} \right] + \frac{3}{4} \right\} - 1 = \\
 & = \left\{ \frac{5}{6} - \frac{20}{36} + \frac{3}{4} \right\} - 1 = \\
 & = \left\{ \frac{30-20+27}{36} \right\} - 1 = \\
 & = \frac{37}{36} - 1 = \\
 & = \frac{37-36}{36} = \frac{1}{36}
 \end{aligned}$$

$$\begin{aligned}
 & \left[\left(1 - \frac{1}{4} - \frac{1}{2} \right) + \left(1 + \frac{1}{6} \right) \right] - \left(\frac{5}{3} - \frac{1}{3} - \frac{1}{6} \right) = \\
 & = \left[\left(\frac{4-1-2}{4} \right) + \left(\frac{6+1}{6} \right) \right] - \left(\frac{10-2-1}{6} \right) = \\
 & = \left[\frac{1}{4} + \frac{7}{6} \right] - \frac{7}{6} = \\
 & = \left[\frac{3+14}{12} \right] - \frac{7}{6} = \\
 & = \frac{17}{12} - \frac{7}{6} = \\
 & = \frac{17-14}{12} = \frac{3}{12} = \frac{1}{4}
 \end{aligned}$$

$$\begin{aligned}
 & \left[\left(1 + \frac{1}{4} - \frac{1}{2} \right) + \left(1 + \frac{1}{6} \right) \right] - \left(\frac{5}{3} - \frac{1}{3} - \frac{1}{6} \right) = \\
 & = \left[\left(\frac{4+1-2}{4} \right) + \left(\frac{6+1}{6} \right) \right] - \left(\frac{10-2-1}{6} \right) = \\
 & = \left[\frac{3}{4} + \frac{7}{6} \right] - \frac{7}{6} = \\
 & = \left[\frac{9+14}{12} \right] - \frac{7}{6} = \\
 & = \frac{23}{12} - \frac{7}{6} = \\
 & = \frac{23-14}{12} = \\
 & = \frac{9}{12} = \frac{3}{4}
 \end{aligned}$$

$$1 - \left\{ \left[\left(1 + \frac{1}{5} \right) - \left(1 - \frac{4}{5} \right) \right] - \left[\left(1 + \frac{1}{4} \right) - \left(1 - \frac{1}{3} \right) \right] \right\} =$$

$$1 - \left\{ \left[\frac{6}{5} - \frac{1}{5} \right] - \left[\frac{5}{4} - \frac{2}{3} \right] \right\} =$$

$$1 - \left\{ 1 - \left[\frac{15 - 8}{12} \right] \right\} =$$

$$1 - \left\{ 1 - \frac{7}{12} \right\} =$$

$$1 - \frac{5}{12} = \frac{7}{12}$$

$$\left(\frac{1}{2} + \left(\frac{1}{2} + \left(\frac{1}{2} + \frac{1}{3} \right) \cdot \frac{4}{5} \right) \right) \cdot \frac{4}{9} - \frac{1}{2} =$$

$$= \left(\frac{1}{2} + \left(\frac{1}{2} + \frac{5}{36} \cdot \frac{4^2}{5} \right) \right) \cdot \frac{4}{9} - \frac{1}{2} =$$

$$= \left(\frac{1}{2} + \left(\frac{1}{2} + \frac{2}{3} \right) \right) \cdot \frac{4}{9} - \frac{1}{2} =$$

$$= \left(\frac{1}{2} + \left(\frac{3 + 4}{6} \right) \right) \cdot \frac{4}{9} - \frac{1}{2} =$$

$$= \left(\frac{1}{2} + \frac{7}{6} \right) \cdot \frac{4}{9} - \frac{1}{2} =$$

$$= \left(\frac{3 + 7}{6} \right) \cdot \frac{4}{9} - \frac{1}{2} =$$

$$= \left(\frac{10}{6} \right) \cdot \frac{4^2}{9} - \frac{1}{2} =$$

$$= \frac{20}{27} - \frac{1}{2} =$$

$$= \frac{40 - 27}{54} = \frac{13}{54}$$

$$3 - \left\{ 1 + \left[1 - \left(\frac{2}{4} - \frac{7}{49} \right) \right] - \left[2 - \left(\frac{2}{4} + \frac{7}{49} \right) \right] \right\}$$

Semplifico $\frac{2}{4}$ in $\frac{1}{2}$ e $\frac{7}{49}$ in $\frac{1}{7}$

$$= 3 - \left\{ 1 + \left[1 - \left(\frac{1}{2} - \frac{1}{7} \right) \right] - \left[2 - \left(\frac{1}{2} + \frac{1}{7} \right) \right] \right\} =$$

$$= 3 - \left\{ 1 + \left[1 - \frac{7-2}{14} \right] - \left[2 - \frac{7+2}{14} \right] \right\} =$$

$$= 3 - \left\{ 1 + \left[1 - \frac{5}{14} \right] - \left[2 - \frac{9}{14} \right] \right\} =$$

$$= 3 - \left\{ 1 + \left[\frac{14-5}{14} \right] - \left[\frac{28-9}{14} \right] \right\} =$$

$$= 3 - \left\{ 1 + \frac{9}{14} - \frac{19}{14} \right\} =$$


$$= 3 - \frac{14+9-19}{14} =$$


$$= 3 - \frac{4}{14} =$$


Semplifico $\frac{4}{14}$ in $\frac{2}{7}$


$$= 3 - \frac{2}{7} = \frac{21-2}{7} = \frac{19}{7}$$


Keywords

 *Matematica, Aritmetica, Frazioni, Espressioni Q, addizione, sottrazione, moltiplicazione, divisione, esercizi con soluzioni*

 *Math, Arithmetic, Fraction expressions, Fraction, Expression, Addition, Subtraction, Multiplication, Division, Fraction expressions solved*

 *Matemática, Aritmética, Fracción, Expresiones, Resta, Sustracción, Suma, Adición, Multiplicación, División*

 *Mathématique, Arithmétique, Fraction, Problèmes avec fractions, Addition, Soustraction, Multiplication, Division*

 *Mathematik, Arithmetik, Bruchrechnung, Bruch, Subtraktion, Addition, Multiplikation, Division*

Arabic: كسْر

Chinese (Simplified): 分数

Chinese (Traditional): 分數

Czech: zlomek

Danish: brøkdæl

Dutch: deel, breuk

Estonian: murd(arv)

Finnish: murtoluku

French: fraction

Greek: κλάσμα

Hungarian: hányad, tört(rész)

Icelandic: brot

Indonesian: pecahan

Japanese: 分数

Korean: 분수

Lithuanian: trupmena

Norwegian: brøk(del)

Polish: ułamek

Portuguese (Brazil): fração

Portuguese (Portugal): fracção

Romanian: fracție

Russian: дробь

Slovak: zlomok

Slovenian: ulomek

Swedish: del

Turkish: kesir