

1. $\frac{5}{18} - \frac{4}{45} + \frac{2}{9} + \frac{2}{27}$
2. $-\left(-\frac{1}{3} + \frac{11}{21}\right) \cdot \frac{1}{5} + \left(-\frac{5}{7} + \frac{9}{35}\right) \cdot \frac{11}{3}$
3. $\frac{1}{3} - \frac{7}{12} + \frac{5}{9} + \frac{2}{9}$
4. $\frac{-\frac{9}{2} \cdot \left(-\frac{1}{6}\right)}{\left(-\frac{1}{2} + \frac{11}{2}\right) \cdot \frac{1}{3}}$
5. $-\frac{1}{10} - \left(-\frac{5}{6}\right) - \left(\frac{13}{36} + \left(-\frac{5}{18}\right)\right)$
6. $\frac{30}{11} \cdot \frac{\frac{11}{6} - \frac{11}{10} \cdot \frac{24}{55}}{3 - 2\left(\frac{3}{5} - \frac{1}{22}\right)}$
7. $\frac{\left(\frac{2}{3}\right)^2 \cdot \left(\frac{3}{2}\right)^4}{\left(\frac{9}{6}\right)^{-3}}$
8. $\frac{\left(\frac{1}{4}\right)^{-3} \cdot 8^3 \cdot \left(\frac{5}{6}\right)^4}{4^3 \cdot 12^{-4} \cdot \left(\frac{50}{3}\right)^2}$
9. $\frac{\left(\frac{2}{3}\right)^5 \cdot \left(\frac{121}{24}\right)^2}{6^{-5} \cdot \left(\frac{22}{3}\right)^3}$
10. $\frac{0.02^4 \cdot 10^3}{25^{-2} \cdot 0.001^3}$
11. $\frac{\left(\frac{1}{a}\right)^{-7}}{a^{-5} \cdot a^{-7}}$
12. $\frac{\left(\frac{1}{x}\right)^{-2} \cdot \left(\frac{1}{x}\right)^{11}}{\left(\frac{1}{x}\right)^{-8} \cdot x^{-3} \cdot x^{-6}}$
13. $\frac{(x^{-2}y)^9}{y^{-2} \cdot \left(\frac{y}{x}\right)^{10}}$

Solucions

1. $\frac{131}{270}$ 2. $-\frac{12}{7}$ 3. $\frac{19}{36}$ 4. $\frac{9}{20}$ 5. $\frac{13}{20}$ 6. $\frac{203}{104}$ 7. $\left(\frac{3}{2}\right)^5$ 8. $2^{11} \cdot 3^2$ 9. 66 10. 10^8
11. a^{19} 12. $\frac{1}{x^8}$ 13. $\frac{y}{x^8}$