

2. Calculați:

a) $\frac{5}{6} - \frac{4}{9}$;

b) $\frac{7}{10} - \frac{4}{15}$;

c) $\frac{7}{8} - \frac{5}{6}$;

d) $\frac{5}{8} - \frac{1}{12}$;

e) $\frac{3}{4} - \frac{5}{18}$;

f) $\frac{7}{10} - \frac{5}{12}$;

g) $\frac{5}{14} - \frac{4}{21}$;

h) $\frac{11}{12} - \frac{7}{18}$;

i) $\frac{5}{12} - \frac{4}{15}$;

j) $\frac{9}{28} - \frac{5}{21}$.

3. Calculați:

a) $\frac{2}{3} + \frac{3}{4} - \frac{5}{6}$;

b) $\frac{5}{8} + \frac{1}{6} - \frac{3}{4}$;

c) $\frac{7}{12} + \frac{3}{8} - \frac{11}{24}$;

d) $\frac{3}{4} + \frac{5}{6} - \frac{2}{3}$;

e) $\frac{3}{4} + \frac{5}{12} - \frac{7}{8}$;

f) $\frac{4}{5} + \frac{7}{10} - \frac{5}{6}$;

g) $\frac{5}{6} + \frac{3}{14} - \frac{8}{21}$;

h) $\frac{5}{6} + \frac{7}{10} - \frac{8}{15}$;

i) $\frac{5}{6} + \frac{7}{18} - \frac{11}{12}$.

4. Calculați:

a) $\frac{9}{10} - \left(\frac{5}{6} - \frac{4}{5}\right)$;

b) $\frac{5}{6} - \left(\frac{3}{4} - \frac{7}{12}\right)$;

c) $\frac{8}{9} - \left(\frac{5}{6} - \frac{2}{3}\right)$;

d) $\frac{11}{15} - \left(\frac{7}{10} - \frac{3}{5}\right)$;

e) $\frac{13}{14} - \left(\frac{6}{7} - \frac{3}{4}\right)$;

f) $\frac{11}{21} - \left(\frac{5}{6} - \frac{9}{14}\right)$.

5. Calculați:

a) $\left(\frac{3}{10} + \frac{4}{15}\right) - \left(\frac{5}{6} - \frac{4}{5}\right)$;

b) $\left(\frac{5}{6} + \frac{7}{12}\right) - \left(\frac{7}{9} - \frac{5}{18}\right)$;

c) $\left(\frac{9}{10} + \frac{4}{15}\right) - \left(\frac{9}{10} - \frac{13}{20}\right)$;

d) $\left(\frac{3}{8} + \frac{5}{12}\right) - \left(\frac{8}{9} - \frac{3}{4}\right)$;

e) $\left(\frac{9}{14} + \frac{4}{21}\right) - \left(\frac{4}{7} - \frac{9}{28}\right)$;

f) $\left(\frac{8}{9} + \frac{5}{12}\right) - \left(\frac{5}{6} - \frac{5}{18}\right)$.

6. Calculați:

a) $\left(\frac{7}{8} + \frac{1}{6}\right) - \left(\frac{1}{3} + \frac{5}{9}\right)$;

b) $\left(\frac{9}{10} + \frac{8}{15}\right) - \left(\frac{1}{6} + \frac{11}{30}\right)$;

c) $\left(\frac{13}{24} + \frac{5}{9}\right) - \left(\frac{5}{12} + \frac{7}{18}\right)$;

d) $\left(\frac{7}{12} + \frac{13}{24}\right) - \left(\frac{1}{6} + \frac{5}{8}\right)$;

e) $\left(\frac{7}{9} + \frac{5}{12}\right) - \left(\frac{1}{18} + \frac{5}{6}\right)$;

f) $\left(\frac{5}{6} + \frac{8}{15}\right) - \left(\frac{7}{10} + \frac{4}{15}\right)$.

7. Calculați:

a) $\left(\frac{13}{14} - \frac{5}{6}\right) + \left(\frac{16}{21} - \frac{9}{14}\right)$;

b) $\left(\frac{7}{6} - \frac{11}{18}\right) - \left(\frac{7}{12} - \frac{4}{9}\right)$;

c) $\left(\frac{7}{10} - \frac{4}{15}\right) - \left(\frac{9}{20} - \frac{1}{6}\right)$;

d) $\left(\frac{8}{9} - \frac{5}{12}\right) - \left(\frac{17}{24} - \frac{5}{18}\right)$;

e) $\left(\frac{13}{14} - \frac{4}{21}\right) - \left(\frac{6}{7} - \frac{15}{28}\right)$;

f) $\left(\frac{13}{24} - \frac{5}{36}\right) - \left(\frac{11}{18} - \frac{7}{12}\right)$.

8. Efectuați calculele:

a) $\left(1\frac{7}{12} + 2\frac{1}{3}\right) - \left(2\frac{1}{4} - 1\frac{1}{6}\right)$;

b) $\left(\frac{5}{6} + 1\frac{1}{6}\right) - \left(\frac{1}{3} + \frac{3}{4}\right)$;

c) $\left(9\frac{5}{14} - 6\frac{11}{42}\right) - \left(8\frac{3}{14} - 5\frac{16}{21}\right)$;

d) $\left(3\frac{2}{15} + 1\frac{5}{6}\right) - \left(2\frac{2}{3} + 1\frac{7}{10}\right)$.

9. Efectuați calculele:

✓ a) $\left(2\frac{8}{15} - 1\frac{9}{10}\right) + \left(3\frac{5}{6} - 2\frac{4}{5}\right)$;

✓ b) $\left(4\frac{2}{3} - 2\frac{7}{8}\right) - \left(\frac{11}{12} - \frac{1}{6}\right)$;

c) $\left(2\frac{1}{3} - 1\frac{1}{6}\right) - \left(\frac{5}{12} + \frac{7}{24} - \frac{3}{8}\right)$;

d) $\left(1\frac{3}{8} + 2\frac{5}{6}\right) - \left(1\frac{7}{12} + \frac{13}{18}\right)$.

10. Efectuați calculele:

a) $\left[5\frac{2}{5} - \left(2\frac{3}{10} + 1\frac{1}{6}\right)\right] - 1\frac{2}{3}$;

b) $\left(2\frac{2}{15} + \frac{7}{9} - 1\frac{1}{5}\right) - \left(\frac{1}{3} + \frac{2}{5}\right)$;

c) $2\frac{1}{3} - \left[\left(2\frac{2}{15} + 1\frac{1}{25}\right) - 2\frac{2}{5}\right]$;

d) $1\frac{7}{8} - \left[5\frac{7}{20} - \left(1\frac{1}{8} + 2\frac{3}{5}\right)\right]$.

11. Efectuați calculele:

a) $\left(1\frac{1}{5} + 1\frac{3}{10}\right) - \left[5\frac{7}{15} - \left(2\frac{2}{5} + 1\frac{1}{6}\right)\right]$;

b) $\left(3\frac{2}{5} - 1\frac{5}{8}\right) - \left[\left(2\frac{3}{4} - 1\frac{1}{5}\right) - \frac{7}{10}\right]$;

c) $\left(3\frac{3}{5} - 1\frac{2}{4}\right) - \left[\left(4\frac{1}{2} - 2\frac{2}{5}\right) - 1\frac{3}{4}\right]$;

d) $3\frac{5}{6} - \left\{2\frac{5}{9} - \left[\left(3\frac{5}{6} - 1\frac{2}{9}\right) - 1\frac{3}{4}\right]\right\}$.

12. Calculați:

a) $\frac{7}{16} \cdot \frac{8}{21}$;

b) $\frac{14}{25} \cdot \frac{20}{21}$;

c) $\frac{16}{21} \cdot \frac{35}{48}$;

d) $\frac{49}{54} \cdot \frac{45}{28}$;

e) $\frac{40}{27} \cdot \frac{45}{32}$;

f) $\frac{16}{35} \cdot \frac{21}{40}$;

g) $\frac{27}{28} \cdot \frac{35}{36}$;

h) $\frac{25}{42} \cdot \frac{28}{15}$;

i) $\frac{175}{72} \cdot \frac{48}{125}$;

j) $\frac{35}{54} \cdot \frac{45}{56}$.

✓ 13. Calculați:

a) $\frac{20}{9} : \frac{8}{3}$;

b) $\frac{56}{45} : \frac{49}{30}$;

c) $\frac{8}{27} : \frac{32}{45}$;

d) $\frac{16}{27} : \frac{40}{9}$;

e) $\frac{32}{81} : \frac{16}{27}$;

f) $\frac{15}{16} : \frac{25}{24}$;

g) $\frac{12}{35} : \frac{15}{28}$;

h) $\frac{45}{64} : \frac{25}{32}$;

i) $\frac{25}{54} : \frac{35}{48}$;

j) $\frac{16}{45} : \frac{40}{63}$.

✓ 14. Efectuați calculele:

a) $\left(\frac{8}{9} - \frac{5}{6}\right) : \frac{5}{9} - \left(\frac{5}{12} - \frac{7}{18}\right) : \frac{5}{12}$;

b) $\left(\frac{9}{14} + \frac{4}{21}\right) \cdot \frac{9}{20} + \left(\frac{25}{84} - \frac{5}{28}\right) : \frac{10}{21}$;

c) $\left(\frac{5}{8} - \frac{1}{6}\right) : \frac{11}{18} - \left(\frac{11}{24} - \frac{13}{36}\right) \cdot \frac{9}{14}$;

d) $\left(\frac{7}{12} - \frac{5}{18}\right) : \frac{11}{15} + \left(\frac{13}{24} - \frac{7}{18}\right) : \frac{5}{12}$;

e) $\left(\frac{11}{28} - \frac{13}{42}\right) : \frac{1}{7} - \left(\frac{8}{21} - \frac{3}{14}\right) \cdot \frac{4}{5}$;

f) $\left(\frac{7}{12} - \frac{5}{18}\right) : \frac{22}{45} - \left(\frac{8}{9} - \frac{5}{24}\right) \cdot \frac{9}{14}$.

15. Calculați:

~~a)~~ $\left(\frac{3}{4} + \frac{1}{8}\right) \cdot \frac{4}{21} + \frac{7}{24} \cdot \frac{16}{21}$;

~~c)~~ $\left(\frac{8}{15} - \frac{3}{10}\right) \cdot \frac{15}{14} + \frac{16}{21} \cdot \frac{35}{32}$;

e) $\left(\frac{11}{14} - \frac{4}{21}\right) \cdot \frac{14}{15} + \frac{14}{9} \cdot \frac{6}{35}$;

b) $\left(\frac{5}{6} - \frac{4}{9}\right) \cdot \frac{9}{14} - \frac{5}{18} \cdot \frac{9}{20}$;

~~d)~~ $\left(\frac{9}{8} - \frac{8}{21}\right) \cdot \frac{21}{25} + \frac{9}{14} \cdot \frac{28}{27}$;

f) $\left(\frac{5}{24} + \frac{11}{72} - \frac{7}{36}\right) \cdot \frac{2}{3} + \frac{8}{15} \cdot \frac{32}{45}$.

16. Calculați:

a) $\left(\frac{5}{6} - \frac{4}{9}\right) \cdot \frac{9}{35} + \left(\frac{8}{9} - \frac{7}{12}\right) \cdot \frac{55}{54}$;

c) $\left(\frac{7}{36} + \frac{5}{24} - \frac{9}{32}\right) \cdot \frac{7}{48} + \frac{40}{63} \cdot \frac{20}{21}$;

e) $\left(\frac{10}{9} \cdot \frac{12}{35} + \frac{4}{21} \cdot \frac{2}{3}\right) \cdot \frac{3}{14} - \frac{4}{35} \cdot \frac{24}{25}$;

b) $\left(\frac{4}{9} - \frac{3}{8}\right) \cdot \frac{8}{15} + \left(\frac{5}{6} - \frac{3}{4}\right) \cdot \frac{2}{3}$;

d) $\left(\frac{27}{32} - \frac{7}{24} - \frac{5}{36}\right) \cdot \frac{17}{24} + \frac{14}{27} \cdot \frac{28}{45}$;

f) $\left(\frac{8}{14} + \frac{3}{35} \cdot \frac{9}{25}\right) \cdot \frac{2}{7} - \frac{4}{21} \cdot \frac{16}{84}$.

17. Calculați:

a) $\left(\frac{8}{15} - \frac{3}{10}\right) \cdot \frac{14}{15} + \left(\frac{2}{9} - \frac{1}{12}\right) \cdot \frac{5}{9}$;

c) $\left(\frac{5}{6} + \frac{4}{5}\right) \cdot \frac{15}{28} - \left(\frac{7}{12} - \frac{5}{18}\right) \cdot \frac{22}{27}$;

e) $\left(\frac{11}{18} - \frac{13}{24}\right) \cdot \frac{25}{24} + \left(\frac{8}{15} - \frac{9}{20}\right) \cdot \frac{5}{8}$;

b) $\left(\frac{9}{14} - \frac{5}{21}\right) \cdot \frac{7}{17} + \left(\frac{3}{8} - \frac{1}{6}\right) \cdot \frac{8}{15}$;

d) $\left(\frac{11}{12} - \frac{2}{9}\right) \cdot \frac{5}{9} - \left(\frac{9}{14} - \frac{12}{35}\right) \cdot \frac{12}{25}$;

f) $\left(\frac{5}{6} - \frac{4}{9}\right) \cdot \frac{14}{15} - \left(\frac{7}{12} - \frac{3}{8}\right) \cdot \frac{15}{16}$.

18. Calculați:

a) $\left(\frac{5}{6} - \frac{8}{15}\right) \cdot \frac{4}{5} - \left(\frac{8}{9} - \frac{7}{12}\right) \cdot \frac{3}{22}$;

c) $\frac{11}{12} - \left(\frac{40}{27} \cdot \frac{32}{45} - \frac{49}{54} \cdot \frac{28}{45}\right) \cdot \frac{15}{16}$;

b) $\left(\frac{3}{4} + \frac{5}{6} - \frac{17}{12}\right) \cdot \frac{3}{4} - \left(\frac{5}{14} + \frac{4}{21} - \frac{15}{28}\right) \cdot \frac{3}{28}$;

d) $\frac{8}{21} - \left(\frac{56}{45} \cdot \frac{49}{30} - \frac{16}{21} \cdot \frac{35}{48}\right) \cdot \frac{26}{27}$.

19. Calculați:

a) $\left(\frac{9}{28} - \frac{11}{42}\right) \cdot \frac{15}{28} - \left(\frac{11}{18} - \frac{13}{24}\right) \cdot \frac{24}{25}$;

c) $\frac{5}{18} + \left(\frac{25}{42} \cdot \frac{15}{28} - \frac{27}{28} \cdot \frac{35}{36}\right) \cdot \frac{75}{96}$;

b) $\left(\frac{1}{6} + \frac{9}{14} - \frac{8}{21}\right) \cdot \frac{14}{15} - \left(\frac{8}{15} + \frac{11}{20} - \frac{5}{6}\right) \cdot \frac{8}{15}$;

d) $\frac{7}{18} - \left(\frac{25}{42} \cdot \frac{45}{56} - \frac{18}{35} \cdot \frac{27}{28}\right) \cdot \frac{14}{15}$.

20. Calculați:

a) $\left(\frac{7}{12} - \frac{5}{9}\right) \cdot \frac{2}{27} - \left(\frac{7}{8} - \frac{5}{6}\right) \cdot \frac{2}{9}$;

c) $\left(\frac{11}{18} + \frac{7}{24} - \frac{25}{36}\right) \cdot \frac{5}{16} - \left(\frac{7}{12} + \frac{5}{21} - \frac{9}{28}\right) \cdot \frac{5}{6}$;

b) $\left(\frac{11}{24} - \frac{7}{18}\right) \cdot \frac{25}{42} - \left(\frac{8}{21} - \frac{9}{28}\right) \cdot \frac{14}{15}$;

d) $\frac{7}{8} - \left(\frac{15}{16} \cdot \frac{25}{24} - \frac{32}{81} \cdot \frac{16}{27}\right) \cdot \frac{25}{28}$.

21. Efectuați calculele:

a) $1\frac{5}{7} \cdot \left(2\frac{1}{3} - 1\frac{3}{4}\right)$;

b) $1\frac{1}{3} + 1\frac{2}{13} \cdot \left(3\frac{2}{5} - 1\frac{2}{3}\right)$;

c) $11\frac{3}{8} - \left(2\frac{5}{6} - 1\frac{3}{8}\right) \cdot 1\frac{5}{7}$;

d) $3\frac{2}{3} - \frac{3}{17} \cdot \left(3\frac{2}{7} - 1\frac{2}{3}\right)$.

22. Efectuați calculele:

a) $2\frac{2}{3} \cdot 1\frac{2}{4} - 1\frac{1}{5} \cdot 1\frac{1}{4} \cdot \frac{2}{3}$;

b) $3\frac{1}{3} \cdot 1\frac{1}{5} + 1\frac{1}{4} : 1\frac{2}{3} \cdot 1\frac{1}{3}$;

c) $\frac{3}{7} \cdot \left(1\frac{3}{5} \cdot 2\frac{1}{2} - 1\frac{1}{4} \cdot 1\frac{1}{3}\right)$;

d) $\left(5\frac{1}{4} - 3\frac{2}{4} \cdot 1\frac{1}{7}\right) : 1\frac{2}{3}$.

23. Efectuați calculele:

a) $\left(7\frac{1}{10} - 2\frac{3}{16} \cdot 1\frac{19}{21}\right) \cdot \left(1\frac{7}{44} + 2\frac{11}{14} \cdot \frac{21}{26}\right)$;

b) $1\frac{5}{6} - \left(1\frac{5}{12} + 3\frac{3}{8} \cdot \frac{2}{15}\right) : 2\frac{1}{10} + \frac{4}{9}$;

c) $\frac{1}{19} \cdot \left[35\frac{2}{3} - \left(5\frac{1}{3} + 7\frac{1}{2} \cdot 3\frac{1}{5}\right)\right] + \frac{29}{30}$;

d) $9\frac{8}{15} - \left(1\frac{3}{20} \cdot 1\frac{16}{69} + 3\frac{4}{15} : 1\frac{17}{25}\right) \cdot 2\frac{16}{55}$.

24. Efectuați calculele:

a) $\frac{3}{10} \cdot 4\frac{1}{6} + \left[1\frac{5}{6} - \left(1\frac{5}{12} + 3\frac{3}{8} \cdot \frac{2}{15}\right) : 2\frac{1}{10} + \frac{4}{9}\right] \cdot 2\frac{7}{10}$;

b) $\left[\left(2\frac{4}{9} - 1\frac{19}{45} \cdot \frac{15}{32}\right) : 2\frac{2}{3} + 3\frac{3}{5}\right] : 1\frac{23}{25} + 3\frac{5}{6}$;

c) $\left\{3\frac{3}{4} \cdot \left[\left(7\frac{11}{21} - 5\frac{1}{4} \cdot 1\frac{13}{35}\right) : 2\frac{6}{14}\right] + 1\frac{2}{3}\right\} : 1\frac{5}{8}$;

d) $8\frac{1}{5} + \frac{24}{25} \cdot \left[\frac{3}{4} + \left(3\frac{3}{4} \cdot 1\frac{1}{5} - 2\frac{1}{10} : 1\frac{1}{13}\right) : \left(1\frac{7}{8} \cdot 1\frac{3}{5} - \frac{11}{15}\right)\right]$.

25. Efectuați calculele:

a) $8\frac{5}{12} - \left(1\frac{1}{26} \cdot \frac{13}{45} + 1\frac{1}{21} : 1\frac{27}{28}\right) \cdot 2\frac{2}{15}$;

b) $1\frac{16}{25} - \frac{4}{15} \cdot \left\{27\frac{1}{2} : \left[\left(5\frac{1}{3} - 3\frac{1}{4}\right) \cdot 5\frac{1}{2}\right]\right\}$;

c) $4\frac{1}{6} + \frac{7}{15} \cdot \left[2\frac{1}{2} + \left(7\frac{1}{10} - 2\frac{3}{16} \cdot 1\frac{19}{21}\right) \cdot \left(1\frac{7}{44} + 2\frac{11}{14} \cdot \frac{21}{26}\right)\right]$.

26. Efectuați calculele:

a) $2\frac{3}{4} : \frac{11}{14} - 1\frac{19}{24} : \left(\frac{35}{39} \cdot 1\frac{9}{56} - \frac{14}{15} \cdot \frac{10}{21}\right)$;

b) $\frac{8}{49} : \frac{1}{21} - \left(1\frac{7}{18} \cdot \frac{4}{75} + 4\frac{7}{12} \cdot \frac{16}{35}\right) : 1\frac{14}{27}$;

c) $2\frac{4}{5} \cdot \left[6\frac{1}{4} \cdot \left(3\frac{7}{30} - 1\frac{1}{10}\right) + 4\frac{1}{11} \cdot \left(1\frac{1}{2} + 1\frac{9}{14}\right)\right] - \frac{8}{15}$.