① a) $\left(\frac{1}{4}+\frac{3}{10}\right)\cdot\frac{5}{11}=$

$=\left(\frac{5}{20}+\frac{6}{20}\right)\cdot\frac{5}{11}=$

$=\frac{11\cdot 5\cdot 1\cdot 1}{20\cdot 11\cdot 1\cdot 4}=$

$=\frac{1}{4}$

b) $\frac{15}{25}:\left(\frac{1}{2}+\frac{5}{8}\right)=$

$=\frac{15}{25}:\left(\frac{4}{8}+\frac{5}{8}\right)=$

$=\frac{15\cdot 8\cdot 5\cdot 1}{25\cdot 9\cdot 3\cdot 5}=$

$=\frac{8}{15}$

c) $\left(\frac{3}{8}+\frac{5}{6}+\frac{1}{4}\right):\frac{7}{36}=$

$=\left(\frac{9}{24}+\frac{20}{24}+\frac{6}{24}\right):\frac{7}{36}=$

$=\frac{35\cdot 36\cdot 5\cdot 3}{24\cdot 7\cdot 1\cdot 2}=$

$=\frac{15}{2}=7\frac{1}{2}$

č) $1\frac{9}{15}\cdot\left(\frac{11}{12}+\frac{1}{8}\right)=$

$=1\frac{9}{15}\cdot\left(\frac{22}{24}+\frac{3}{24}\right)=$

$=\frac{24\cdot 25\cdot 1\cdot 5}{15\cdot 24\cdot 1\cdot 3}=$

$=\frac{5}{3}=1\frac{2}{3}$

d) $\left(\frac{7}{8}-\frac{5}{6}\right)\cdot\left(\frac{1}{4}+\frac{1}{2}\right)=$

$=\left(\frac{21}{24}-\frac{20}{24}\right)\cdot\left(\frac{1}{4}+\frac{2}{4}\right)=$

$=\frac{1\cdot 3\cdot 1}{24\cdot 4\cdot 8}=$

$=\frac{1}{32}$

e) $\left(2\frac{2}{5}-1\frac{3}{10}\right):3\frac{7}{11}=$

$=\left(2\frac{4}{10}-1\frac{3}{10}\right):3\frac{7}{11}=$

$=1\frac{1}{10}:3\frac{7}{11}=$

$=\frac{11\cdot 11}{10\cdot 40}=\frac{121}{400}$

f) $\left(3\frac{3}{5}+2\frac{1}{4}\right):\left(1\frac{1}{10}+2\frac{1}{2}\right)=$

$=\left(3\frac{12}{20}+2\frac{5}{20}\right):\left(1\frac{1}{10}+2\frac{5}{10}\right)=$

$=5\frac{17}{20}:3\frac{6}{10}=$

$=\frac{117\cdot 10\cdot 1\cdot 13}{20\cdot 36\cdot 2\cdot 4}=$

$=\frac{13}{8}=1\frac{5}{8}$

g) $\left(\frac{3}{5}+\frac{1}{2}\right)\cdot\left(\frac{2}{11}-\frac{5}{33}\right)\cdot\left(\frac{1}{4}+\frac{1}{6}\right)=$

$=\left(\frac{6}{10}+\frac{5}{10}\right)\cdot\left(\frac{6}{33}-\frac{5}{33}\right)\cdot\left(\frac{3}{12}+\frac{2}{12}\right)=$

$=\frac{11}{10}\cdot\frac{1}{33}\cdot\frac{5}{12}=$

$=\frac{11\cdot 1\cdot 5\cdot 1\cdot 1}{10\cdot 33\cdot 12\cdot 3\cdot 2}=\frac{1}{72}$

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

$=\frac{2}{5}\cdot\left(\frac{2}{4}+\frac{3}{4}\right)-\frac{1\cdot 6\cdot 2}{3\cdot 5\cdot 1}=$

$=\frac{2\cdot 5\cdot 1\cdot 1}{5\cdot 4\cdot 1\cdot 2}-\frac{2}{5}=$

$=\frac{1}{2}-\frac{2}{5}=$

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

$=\frac{1}{10}$

i) $\frac{2}{5}+\frac{4}{5}:\frac{8}{15}=$

$=\frac{2}{5}+\frac{4\cdot 15\cdot 1\cdot 3}{5\cdot 8\cdot 2\cdot 1}=$

$=\frac{2}{5}+\frac{3}{2}=$

$=\frac{4}{10}+\frac{15}{10}=$

$=\frac{19}{10}=1\frac{9}{10}$

(2) a) $\frac{7}{8} \cdot \frac{4}{7} + \frac{3}{7} : \frac{6}{21} =$

$= \frac{7 \cdot 4 \cdot 1 \cdot 1}{8 \cdot 7 \cdot 1 \cdot 2} + \frac{3 \cdot 21 \cdot 1 \cdot 3}{7 \cdot 6 \cdot 2 \cdot 1} =$

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

$= \frac{4}{2} = 2$

b) $\frac{2}{5} + \frac{4}{5} : \frac{8}{15} =$

$= \frac{2}{5} + \frac{4 \cdot 15 \cdot 1 \cdot 3}{5 \cdot 8 \cdot 2 \cdot 1} =$

$= \frac{2}{5} + \frac{3}{2} =$

$= \frac{4}{10} + \frac{15}{10} =$

$= \frac{19}{10} = 1\frac{9}{10}$

c) $\frac{4}{9} \cdot \frac{3}{8} + \frac{3}{5} : \frac{9}{10} =$

$= \frac{4 \cdot 3 \cdot 1 \cdot 1}{9 \cdot 8 \cdot 2 \cdot 3} + \frac{3 \cdot 10 \cdot 1 \cdot 2}{5 \cdot 9 \cdot 3 \cdot 1} =$

$= \frac{1}{6} + \frac{2}{3} =$

$= \frac{1}{6} + \frac{4}{6} =$

$= \frac{5}{6}$

c) $\frac{4}{5} : \frac{3}{8} - \frac{3}{5} \cdot \frac{1}{2} =$

$= \frac{4 \cdot 8}{5 \cdot 3} - \frac{3 \cdot 1}{5 \cdot 2} =$

$= \frac{32}{15} - \frac{3}{10} =$

$= \frac{64}{30} - \frac{9}{30} =$

$= \frac{55}{30} = 1\frac{25}{30} = 1\frac{5}{6}$

d) $\frac{7}{8} - \frac{3}{4} \cdot \frac{8}{15} =$

$= \frac{7}{8} - \frac{3 \cdot 8 \cdot 1 \cdot 2}{4 \cdot 15 \cdot 5 \cdot 1} =$

$= \frac{7}{8} - \frac{2}{5} =$

$= \frac{35}{40} - \frac{16}{40} =$

$= \frac{19}{40}$

e) $\frac{8}{35} : \frac{24}{25} + \frac{2}{5} =$

$= \frac{8 \cdot 25 \cdot 1 \cdot 5}{35 \cdot 24 \cdot 3 \cdot 7} + \frac{2}{5} =$

$= \frac{5}{21} + \frac{2}{5} =$

$= \frac{25}{105} + \frac{42}{105} =$

$= \frac{67}{105}$

f) $3\frac{3}{4} + 2\frac{4}{5} : 4\frac{1}{5} =$

$= 3\frac{3}{4} + \frac{14 \cdot 5 \cdot 2 \cdot 1}{5 \cdot 24 \cdot 3 \cdot 1} =$

$= 3\frac{3}{4} + \frac{2}{3} =$

$= 3\frac{9}{12} + \frac{8}{12} =$

$= 3\frac{17}{12} = 4\frac{5}{12}$

g) $5\frac{1}{4} + 1\frac{1}{3} \cdot 2\frac{1}{4} - 3\frac{5}{8} =$

$= 5\frac{1}{4} + \frac{4 \cdot 9 \cdot 1 \cdot 3}{3 \cdot 4 \cdot 1 \cdot 1} - 3\frac{5}{8} =$

$= 5\frac{1}{4} + 3 - 3\frac{5}{8} =$

$= 8\frac{2}{8} - 3\frac{5}{8} =$

$= 7\frac{10}{8} - 3\frac{5}{8} = 4\frac{5}{8}$

h) $12\frac{4}{5} \cdot 6\frac{1}{4} - 6\frac{1}{4} + 2\frac{3}{8}$

$= \frac{64 \cdot 25 \cdot 16 \cdot 5}{8 \cdot 4 \cdot 1 \cdot 1} - 6\frac{1}{4} + 2\frac{3}{8} =$

$= 80 - 6\frac{2}{8} + 2\frac{3}{8} =$

$= 82\frac{3}{8} - 6\frac{2}{8} = 76\frac{1}{8}$

i) $\frac{5}{12} \cdot \frac{24}{25} + \frac{3}{8} : \frac{3}{4} - \frac{7}{20} \cdot \frac{10}{21} =$

$= \frac{5 \cdot 24 \cdot 1 \cdot 2}{12 \cdot 25 \cdot 5 \cdot 1} + \frac{3 \cdot 4 \cdot 1 \cdot 1}{8 \cdot 3 \cdot 1 \cdot 2} - \frac{7 \cdot 10 \cdot 1 \cdot 1}{20 \cdot 21 \cdot 3 \cdot 2} =$

$= \frac{2}{5} + \frac{1}{2} - \frac{1}{6} =$

$= \frac{12}{30} + \frac{15}{30} - \frac{5}{30} =$

$= \frac{22}{30} = \frac{11}{15}$

j) $\frac{1}{3} \cdot \frac{1}{4} + \frac{1}{5} \cdot \frac{1}{6} =$

$= \frac{1}{12} + \frac{1}{30} =$

$= \frac{5}{60} + \frac{2}{60} = \frac{7}{60}$

k) $\frac{2}{9} \cdot \frac{18}{25} \cdot \frac{5}{8} + \frac{3}{4} : \frac{9}{10} =$

$= \frac{2 \cdot 18 \cdot 5 \cdot 1 \cdot 2 \cdot 1 \cdot 1}{9 \cdot 25 \cdot 8 \cdot 4 \cdot 1 \cdot 5 \cdot 2} + \frac{3 \cdot 10 \cdot 1 \cdot 5}{4 \cdot 9 \cdot 3 \cdot 2} =$

$= \frac{1}{10} + \frac{5}{6} =$

$= \frac{3}{30} + \frac{25}{30} = \frac{28}{30} = \frac{14}{15}$

l) $7\frac{1}{5} \cdot \frac{1}{72} + 3\frac{1}{8} : 11\frac{1}{4} + 4\frac{1}{2} \cdot \frac{4}{27} =$

$= \frac{36 \cdot 1 \cdot 1}{5 \cdot 72 \cdot 2} + \frac{25 \cdot 4 \cdot 5 \cdot 1}{8 \cdot 45 \cdot 9 \cdot 2} + \frac{9 \cdot 4 \cdot 1 \cdot 2}{2 \cdot 27 \cdot 3 \cdot 1} =$

$= \frac{1}{10} + \frac{5}{18} + \frac{2}{3} =$

$= \frac{9}{90} + \frac{25}{90} + \frac{60}{90} = \frac{94}{90} = 1\frac{4}{90} = 1\frac{2}{45}$