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⇒ दिलेल्या 2 संख्यांच्या पाढ्यात असणारी लहानात लहान संख्या.

1) 7, 12 ⇒ 84

2) 15, 20 ⇒ 60

2) 5, 6 ⇒ 30

3) 10, 15 ⇒ 30

5 × 2 × 3

4) 45, 40 ⇒

5 × 9 × 8 ⇒ 360

5) 12, 36, 42 ⇒

6 × 2 × 6 × 7 = 504

6) 15, 24, 36 ⇒ 720

3 × 5 × 8 × 12 = 1440

Addition & Sub :→

(Denomentor must be equal.)

1) $\frac{1}{7} + \frac{2}{7} = \frac{3}{7}$

2) $\frac{5}{9} - \frac{2}{9} = \frac{3}{9} = \frac{1}{3}$

3) $\frac{4}{5} + \frac{2}{5} - \frac{3}{5} = \frac{3}{5}$

4) $\frac{3}{4}^{\times 3} + \frac{1}{6}^{\times 2} = \frac{9+2}{12} = \frac{11}{12}$

5) $\frac{2}{5}^{\times 6} - \frac{1}{3}^{\times 10} + \frac{3}{10}^{\times 3} = \frac{12-10+9}{30} = \boxed{\frac{11}{30}}$

6) $\frac{2}{15}^{\times 4} + \frac{5}{12}^{\times 5} - \frac{3}{20}^{\times 3} = \frac{8+25-9}{60}$

$\Rightarrow \frac{24}{60} = \boxed{\frac{2}{5}}$

1) $\frac{7}{9} - \frac{1}{3} = \frac{7-3}{9} = \frac{4}{9}$ $\quad (\times 3)$

2) $\frac{2}{5} + \frac{1}{3} = \frac{6+5}{15} = \frac{11}{15}$ $\quad (\times 3, \times 5)$

3) $\frac{2}{3} - \frac{3}{4} + \frac{9}{14} = \frac{8-21+18}{28}$ $\quad (\times 4, \times 7, \times 2)$

$\Rightarrow \boxed{\frac{5}{28}}$

4) $\frac{1}{3} + \frac{5}{12} - \frac{1}{4} = \frac{4+5-3}{12}$ $\quad (\times 4, \times 3)$

$\Rightarrow \frac{6}{12} = \boxed{\frac{1}{2}}$

5) $\frac{2}{15} + \frac{3}{20} - \frac{3}{10} = \frac{8+9-18}{60}$ $\quad (\times 4, \times 3, \times 6)$

$\Rightarrow \boxed{\frac{-1}{60}}$

6) $\frac{7}{8} - \frac{4}{5} + \frac{1}{2} + \frac{3}{10}$ $\quad (\times 5, \times 8, \times 10, \times 4)$

$\Rightarrow \frac{35-32+20+12}{40} = \frac{35}{40} = \boxed{\frac{7}{8}}$

7) $\frac{3}{4} - \frac{1}{3} = 8 + \frac{1}{6}$

$\frac{3}{4} - \frac{1}{3} - \frac{1}{6} = \frac{9-4-2}{12}$ $\quad (\times 3, \times 4, \times 2)$

$\Rightarrow \frac{3}{12} = \boxed{\frac{1}{4}}$

1) $25\frac{3}{7} + 18\frac{2}{7} = 43\left(\frac{3}{7} + \frac{2}{7}\right)$

$\Rightarrow 43\left(\frac{5}{7}\right)$ ✓

2) $15\frac{3}{8} - 12\frac{1}{8} = 3\left(\frac{3}{8} - \frac{1}{8}\right)$

$\Rightarrow 3\left(\frac{2}{8}\right) = 3\frac{1}{4}$ ✓

3) $4\frac{2}{3}^{\times 5} - 2\frac{1}{5}^{\times 3} + 3\frac{1}{15}^{\times 1} = 5\left(\frac{10-3+1}{15}\right)$

$= \boxed{5\frac{8}{15}}$

4) $5\frac{4}{5}^{\times 6} - 3\frac{1}{6}^{\times 5} + 12\frac{4}{15}^{\times 2}$

$\Rightarrow 14\left(\frac{24-5+8}{30}\right) \Rightarrow 14\frac{27}{30} = \boxed{14\frac{9}{10}}$

5) $13\frac{5}{6}^{\times 7} - 3\frac{5}{7}^{\times 6} + 12\frac{5}{14}^{\times 3}$

$22\left(\frac{35-30+15}{42}\right)$

$\Rightarrow 22\left(\frac{20}{42}\right) = \boxed{22\frac{10}{21}}$

Law of Indices

1) $5^8 \times 5^7 = 5^{8+7} = 5^{15}$

2) $5^{18} \div 5^{12} = 5^{18-12} = 5^6$

3) $(5^2)^3 = 5^{2\times3} = 5^6$

4) $5^0 = 1$

5) $5^{-8} = \frac{1}{5^8}$

6) $\frac{1}{5^{-3}} = 5^3$

7) $\sqrt{5} = (5)^{\frac{1}{2}}$

8) $\sqrt[3]{5} = (5)^{\frac{1}{3}}$

$\times \longrightarrow +$

$\div \longrightarrow -$

1) $5^3 + 5^4$

2) $5^3 + 5^3 = 125 + 125 =$

$\Rightarrow 2(5^3) = 2 \times 125 = 250$

3) $8\sqrt{5} - 2\sqrt{5} = 6\sqrt{5}$

1) $\frac{3^5 \times 3^7}{3^4} = \frac{3^{12}}{3^4} = 3^8$

2) $\frac{5^4 \times 5^6}{5^3 \times 5^5} = \frac{5^{10}}{5^8} = 5^2$

3) $9^8 = 3^?$

$(3^2)^8 = 3^{16}$

4) $\frac{5^3 \times 125^3}{25^2} = \frac{5^3 \times (5^3)^3}{(5^2)^2} = \frac{5^3 \times 5^9}{5^4} = \boxed{5^8}$

6) $7^3 \times 343^2 \times 49^5 = 7^?$

$7^3 \times (7^3)^2 \times (7^2)^5 = 7^3 \times 7^6 \times 7^{10} = \boxed{7^{19}}$

7) $\frac{512^4 \times 64^3 \times 8^3}{8^{10} \times 8^2} = 8^?$

$\frac{(8^3)^4 \times (8^2)^3 \times (8^3)}{8^{10} \times 8^2} = 8^6 \times 8^3 = 8^9$

$\boxed{? = 9}$

1) $\frac{4^2 \times 8^4 \times 16^2}{32} = 4^x$

$\frac{(2^{2^2}) \times (2^{3^4}) \times (2^{4^2})}{2^5} = (2^2)^x$

$\frac{2^4 \times 2^{12} \times 2^8}{2^5} = 2^{19} = 2^{2x}$

$2x = 19$

$x = \frac{19}{2} = 9.5$

$\frac{4^8 \times 4^4 \times 2^4 \times (4^2)^2}{4 \times 4 \times 2} = 4^x$

$4^4 \times 2^3 \times 4^4 = 4^9$

$4^8 \times (4^1) \times$

1) $$\frac{4^{\frac{1}{3}} \times 16^{\frac{2}{3}}}{64^{\frac{1}{3}}} = 4^{8}$$

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