

## Calcolo del termine incognito di una proporzione

$$5 : 4 = 10 : x$$

$$10 : 5 = 50 : x$$

$$21 : x = 19 : 38$$

$$27 : x = 39 : 52$$

$$4 : x = x : 81$$

$$x : \frac{15}{4} = 1 : \frac{7}{3}$$

$$\frac{2}{3} : \frac{7}{11} = x : \frac{14}{5}$$

$$\frac{11}{3} : \frac{22}{7} = x : \frac{14}{5}$$

$$\frac{1}{4} : x = x : \frac{1}{25}$$

$$\frac{75}{49} : x = x : \frac{3}{16}$$

$$0,0\overline{4} : x = x : 1,6$$

$$x : \left(\frac{1}{8} + \frac{1}{9}\right) = \left(\frac{1}{3} + \frac{7}{6}\right) : \left(\frac{3}{10} - \frac{8}{30}\right)$$

$$x : \left(\frac{1}{8} + \frac{1}{9}\right) = \left(\frac{1}{3} + \frac{7}{6}\right) : \left(\frac{3}{10} + \frac{8}{30}\right)$$

$$\left(\frac{10}{7} \cdot \frac{3}{8} - \frac{2}{7}\right) : x = \left(\frac{5}{6} + \frac{1}{4}\right) : \left(\frac{2}{3} - \frac{1}{8}\right)$$

$$\left(\frac{10}{7} \cdot \frac{3}{8} - \frac{2}{7}\right) : x = \left(\frac{5}{6} + \frac{1}{4}\right) : \left(\frac{2}{3} + \frac{1}{8}\right)$$

$$\left(3 - \frac{2}{3}\right) : x = x : \left[\frac{1}{4} \cdot \left(2 + \frac{1}{3}\right)\right]$$

$$\left[\frac{5}{8} \div \left(\frac{4}{3} - \frac{1}{2}\right)\right] : x = \left[\left(\frac{2}{3} - \frac{2}{9}\right) \cdot \left(1 + \frac{9}{4}\right)\right] : \left[\frac{7}{9} \div \left(\frac{3}{4} + \frac{1}{8}\right)\right]$$

$$\left(\frac{1}{3} + \frac{7}{14} \cdot \frac{8}{5} - \frac{1}{15}\right) : \left(1 + \frac{1}{3}\right) = \left(5 + \frac{1}{3}\right) : x$$

$$\left(1 - \frac{2}{5} + \frac{1}{7} \cdot \frac{7}{5}\right) : \left(1 - \frac{2}{5} + \frac{1}{2}\right) = \left(2 + \frac{2}{5}\right) : x$$

$$x : \left[2 + \frac{1}{2} - \left(1 - \frac{1}{2}\right)^2\right] = \left(1 - \frac{1}{8}\right) : \left(1 + \frac{1}{2} - \frac{2}{7} \cdot \frac{21}{16}\right)$$

$$\left[\left(\frac{2}{3} - \frac{1}{3^2}\right) \div 2^3\right] : \left[\left(1 - \frac{4}{5}\right) \div 3\right] = x : \left[\left(1 - \frac{1}{5}\right) \div \frac{2}{3}\right]$$

$$1 : \left(1 - \frac{4}{5} \cdot \frac{5}{34}\right) = \left[\frac{1}{3} - \left(1 - \frac{1}{2}\right)^2 + \frac{1}{5}\right] : x$$

$$\left(\frac{3}{4} + \frac{1}{2} \div 3\right) : 10 = \left[2 + \left(1 - \frac{1}{2}\right)^3 \div \left(1 - \frac{3}{8}\right)\right] : x$$

$$\sqrt{\frac{3}{14} \div \frac{9}{28} + \frac{10}{9}} \div x = \frac{\frac{4}{5} - \frac{1}{2}}{\sqrt{\frac{21}{50} \div \frac{7}{6}}} \div \left(1 + \frac{5}{2^4}\right)$$

$$(1,\bar{3} + 0,3 - 0,4\bar{6}) \div (3,\bar{2} - 2,\bar{7}) = x \div (0,2 + 0,6)$$

$$(1,\bar{1} - 0,\bar{3}) \div x = x \div \left(2 + \frac{2}{7}\right)$$

## Esercizi e soluzioni

$$5 : 4 = 10 : x$$

$$x = \frac{10 \cdot 4}{5} = 8$$

$$10 : 5 = 50 : x$$

$$x = \frac{5 \cdot 50}{10} = 25$$

$$21 : x = 19 : 38$$

$$x = \frac{21 \cdot 38}{19} = \frac{21 \cdot 2}{1} = 42$$

$$27 : x = 39 : 52$$

$$x = \frac{27 \cdot 52}{39} = \frac{27 \cdot 4}{3} = 9 \cdot 4 = 36$$

$$4 : x = x : 81 \quad 4 \div x = x \div 81$$

$$x = \sqrt{4 \cdot 81} = \sqrt{4} \cdot \sqrt{81} = 2 \cdot 9 = 18$$

$$x : \frac{15}{4} = 1 : \frac{7}{3}$$

$$x = \frac{\frac{15}{4} \cdot 1}{\frac{7}{3}} = \frac{15}{4} \cdot 1 : \frac{7}{3} = \frac{15}{4} \cdot 1 \cdot \frac{3}{7} = \frac{45}{28}$$

$$\frac{2}{3} : \frac{7}{11} = x : \frac{14}{5}$$

$$x = \frac{2}{3} \cdot \frac{14^2}{5} \cdot \frac{11}{7} = \frac{44}{35}$$

$$\frac{11}{3} : \frac{22}{7} = x : \frac{14}{5}$$

$$x = \frac{11}{3} \cdot \frac{14^7}{5} \cdot \frac{7}{22_2} = \frac{49}{35}$$

$$\frac{1}{4} : x = x : \frac{1}{25}$$

$$\frac{1}{4} : x = x : \frac{1}{25}$$

$$x = \sqrt{\frac{1}{4} \cdot \frac{1}{25}} = \sqrt{\frac{1}{100}} = \frac{\sqrt{1}}{\sqrt{100}} = \frac{1}{10}$$

$$\frac{75}{49} : x = x : \frac{3}{16}$$

$$x = \sqrt{\frac{75}{49} \cdot \frac{3}{16}} = \sqrt{\frac{225}{49 \cdot 16}} = \frac{\sqrt{225}}{\sqrt{49 \cdot 16}} = \frac{15}{7 \cdot 4} = \frac{15}{28}$$

$$0,0\bar{4} : x = x : 1,6$$

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$$\frac{4}{90} : x = x : \frac{16}{10}$$

$$x = \sqrt{\frac{4}{90} \cdot \frac{16}{10}} = \sqrt{\frac{64}{900}} = \frac{\sqrt{64}}{\sqrt{900}} = \frac{8}{30} = \frac{4}{15}$$

$$x : \left(\frac{1}{8} + \frac{1}{9}\right) = \left(\frac{1}{3} + \frac{7}{6}\right) : \left(\frac{3}{10} - \frac{8}{30}\right)$$

$$x : \left(\frac{1}{8} + \frac{1}{9}\right) = \left(\frac{1}{3} + \frac{7}{6}\right) : \left(\frac{3}{10} - \frac{8}{30}\right)$$

$$x : \left(\frac{9+8}{72}\right) = \left(\frac{2+7}{6}\right) : \left(\frac{9-8}{30}\right)$$

$$x : \left(\frac{17}{72}\right) = \left(\frac{9}{6}\right) : \left(\frac{1}{30}\right)$$

$$x = \frac{17}{72} \cdot \frac{9}{6} \cdot \frac{30}{1} = \frac{17}{72} \cdot \frac{3}{1} \cdot \frac{15}{1} = \frac{17}{24} \cdot \frac{15}{1} = \frac{255}{24}$$

$$x : \left(\frac{1}{8} + \frac{1}{9}\right) = \left(\frac{1}{3} + \frac{7}{6}\right) : \left(\frac{3}{10} + \frac{8}{30}\right)$$

$$x : \left(\frac{1}{8} + \frac{1}{9}\right) = \left(\frac{1}{3} + \frac{7}{6}\right) : \left(\frac{3}{10} + \frac{8}{30}\right)$$

$$x : \left(\frac{9+8}{72}\right) = \left(\frac{2+7}{6}\right) : \left(\frac{9+8}{30}\right)$$

$$x : \left(\frac{17}{72}\right) = \left(\frac{9}{6}\right) : \left(\frac{17}{30}\right)$$

$$x = \frac{17}{72} \cdot \frac{9}{6} \cdot \frac{30}{17} = \frac{1}{72} \cdot \frac{3}{2} \cdot \frac{30}{1} = \frac{1}{24} \cdot \frac{15}{1} = \frac{15}{24} = \frac{5}{8}$$

$$\left(\frac{10}{7} \cdot \frac{3}{8} - \frac{2}{7}\right) : x = \left(\frac{5}{6} + \frac{1}{4}\right) : \left(\frac{2}{3} - \frac{1}{8}\right)$$

$$\left(\frac{5}{7} \cdot \frac{3}{4} - \frac{2}{7}\right) : x = \left(\frac{10+3}{12}\right) : \left(\frac{16-3}{24}\right)$$

$$\left(\frac{15-8}{28}\right) : x = \left(\frac{10+3}{12}\right) : \left(\frac{16-3}{24}\right)$$

$$\left(\frac{7}{28}\right) : x = \left(\frac{13}{12}\right) : \left(\frac{13}{24}\right)$$

$$x = \left(\frac{7^1}{28_4}\right) \cdot \left(\frac{13}{24}\right) \cdot \left(\frac{12}{13}\right) = \frac{1}{8}$$

$$\left(3 - \frac{2}{3}\right) : x = x : \left[\frac{1}{4} \cdot \left(2 + \frac{1}{3}\right)\right]$$

$$\left(3 - \frac{2}{3}\right) : x = x : \left[\frac{1}{4} \cdot \left(2 + \frac{1}{3}\right)\right]$$

$$\left(\frac{9-2}{3}\right) : x = x : \left[\frac{1}{4} \cdot \frac{7}{3}\right]$$

$$\frac{7}{3} : x = x : \frac{7}{12}$$

$$x = \sqrt{\frac{7}{3} \cdot \frac{7}{12}} = \sqrt{\frac{49}{36}} = \frac{\sqrt{49}}{\sqrt{36}} = \frac{7}{6}$$

$$\left[\frac{5}{8} \div \left(\frac{4}{3} - \frac{1}{2}\right)\right] : x = \left[\left(\frac{2}{3} - \frac{2}{9}\right) \cdot \left(1 + \frac{9}{4}\right)\right] : \left[\frac{7}{9} \div \left(\frac{3}{4} + \frac{1}{8}\right)\right]$$

$$[5/8 : (5/6)] : x = [(4/9)(13/4)] : [7/9 : (7/8)]$$

$$[3/4] : x = [13/9] : [8/9]$$

$$x = (3/4)(8/9)(9/13)$$

$$\mathbf{x = 6/13}$$

$$\left(\frac{1}{3} + \frac{7}{14} \cdot \frac{8}{5} - \frac{1}{15}\right) : \left(1 + \frac{1}{3}\right) = \left(5 + \frac{1}{3}\right) : x$$

$$(1/3 + 4/5 - 1/15) : (4/3) = 16/3 : x$$

$$[(5+12-1)/15] : (4/3) = 16/3 : x$$

$$16/15 : (4/3) = 16/3 : x$$

$$x = (4/3)(16/3)(15/16)$$

$$\mathbf{x = 20/3}$$

$$\left(1 - \frac{2}{5} + \frac{1}{7} \cdot \frac{7}{5}\right) : \left(1 - \frac{2}{5} + \frac{1}{2}\right) = \left(2 + \frac{2}{5}\right) : x$$

$$(5/5 - 2/5 + 1/5) : [(10-4+5)/10] = 12/5 : x$$

$$(4/5) : [11/10] = 12/5 : x$$

$$x = (11/10)(12/5)(5/4)$$

$$\mathbf{x = 33/10}$$

$$x : \left[2 + \frac{1}{2} - \left(1 - \frac{1}{2}\right)^2\right] = \left(1 - \frac{1}{8}\right) : \left(1 + \frac{1}{2} - \frac{2}{7} \cdot \frac{21}{16}\right)$$

$$x : [2 + 1/2 - 1/4] = 7/8 : (1 + 1/2 - 3/8)$$

$$x : [(8+2-1)/4] = 7/8 : [(8+4-3)/8]$$

$$x : [9/4] = 7/8 : [9/8]$$

$$x = (9/4)(7/8)[8/9]$$

$$\mathbf{x = 7/4}$$

$$\left[\left(\frac{2}{3} - \frac{1}{3^2}\right) \div 2^3\right] : \left[\left(1 - \frac{4}{5}\right) \div 3\right] = x : \left[\left(1 - \frac{1}{5}\right) \div \frac{2}{3}\right]$$

$$[(5/9) : 8] : [(1/5) : 3] = x : [(4/5) : 2/3]$$

$$[5/72] : [1/15] = x : [6/5]$$

$$x = (5/72)(6/5)[15/1]$$

$$\mathbf{x = 5/4}$$

$$1 : \left(1 - \frac{4}{5} \cdot \frac{5}{34}\right) = \left[\frac{1}{3} - \left(1 - \frac{1}{2}\right)^2 + \frac{1}{5}\right] : x$$

$$1 : (1 - 2/17) = [1/3 - 1/4 + 1/5] : x$$

$$1 : (15/17) = [(20-15+12)/60] : x$$

$$1 : (15/17) = [17/60] : x$$

$$x = (15/17)[17/60]$$

$$\mathbf{x = 1/4}$$

$$\left(\frac{3}{4} + \frac{1}{2} \div 3\right) : 10 = \left[2 + \left(1 - \frac{1}{2}\right)^3 \div \left(1 - \frac{3}{8}\right)\right] : x$$

$$[3/4 + 1/6] : 10 = [2 + (1/8) : (5/8)] : x$$

$$[(9+2)/12] : 10 = [2 + 1/5] : x$$

$$[11/12] : 10 = [11/5] : x$$

$$x = 10(11/5)[12/11]$$

$$x = 24$$

$$\sqrt{\frac{3}{14} \div \frac{9}{28} + \frac{10}{9}} \div x = \frac{\frac{4}{5} - \frac{1}{2}}{\sqrt{\frac{21}{50} \div \frac{7}{6}}} \div \left(1 + \frac{5}{2^4}\right)$$

$$\sqrt{\frac{2}{3} + \frac{10}{9}} \div x = \left(\frac{8-5}{10} \div \sqrt{\frac{9}{25}}\right) \div \frac{21}{16}$$

$$\sqrt{\frac{16}{9}} \div x = \left(\frac{3}{10} \div \frac{3}{5}\right) \div \frac{21}{16}$$

$$x = \frac{4}{3} \cdot \frac{21}{16} \cdot 2 = \frac{7}{2} = 3,5$$

$$(1,\bar{3} + 0,3 - 0,4\bar{6}) \div (3,\bar{2} - 2,\bar{7}) = x \div (0,2 + 0,6)$$

$$\left(\frac{12}{9} + \frac{3}{10} - \frac{42}{90}\right) \div \left(\frac{29}{9} - \frac{25}{9}\right) = x \div \left(\frac{2}{10} + \frac{6}{10}\right)$$

$$\left(\frac{120 + 27 - 42}{90}\right) \div \left(\frac{29 - 25}{9}\right) = x \div \left(\frac{2 + 6}{10}\right)$$

$$\frac{105}{90} \div \frac{4}{9} = x \div \frac{8}{10}$$

$$\frac{21^7}{18_6} \div \frac{4}{9} = x \div \frac{4}{5}$$

$$x = \frac{7}{2} \cdot \frac{4}{6} \cdot \frac{9^3}{5 \cdot 4} = \frac{21}{10}$$

$$(1,\bar{1} - 0,\bar{3}) \div x = x \div \left(2 + \frac{2}{7}\right)$$

$$\left(\frac{10}{9} - \frac{3}{9}\right) \div x = x \div \left(2 + \frac{2}{7}\right)$$

$$\frac{7}{9} \div x = x \div \frac{16}{7}$$

$$x = \sqrt{\frac{7}{9} \cdot \frac{16}{7}} = \sqrt{\frac{16}{9}} = \frac{4}{3} = 1,\bar{3}$$