

P000 PERGUNTAS

P021) $6x = 2x + 16$

P022) $2x - 5 = x + 1$

P023) $2x + 3 = x + 4$

P024) $5x + 7 = 4x + 10$

P025) $4x - 10 = 2x + 2$

P026) $4x - 7 = 8x - 2$

P027) $2x + 1 = 4x - 7$

P028) $9x + 9 + 3x = 15$

P029) $16x - 1 = 12x + 3$

P030) $3x - 2 = 4x + 9$

P031) $5x - 3 + x = 2x + 9$

P032) $17x - 7x = x + 18$

P033) $x + x - 4 = 17 - 2x + 1$

P034) $x + 2x + 3 - 5x = 4x - 9$

P035) $5x + 6x - 16 = 3x + 2x - 4$

P036) $5x + 4 = 3x - 2x + 4$

P037) $4x - 1 = 3(x - 1)$

P038) $3(x - 2) = 2x - 4$

P039) $2(x - 1) = 3x + 4$

P040) $3(x - 1) - 7 = 15$

P041) $7(x - 4) = 2x - 3$

P042) $3(x - 2) = 4(3 - x)$

P043) $3(3x - 1) = 2(3x + 2)$

P044) $7(x - 2) = 5(x + 3)$

P045) $3(2x - 1) = -2(x + 3)$

P046) $5x - 3(x + 2) = 15$

P047) $2x + 3x + 9 = 8(6 - x)$

P049) $4(x + 10) - 2(x - 5) = 0$

P050) $3(2x + 3) - 4(x - 1) = 3$

P051) $7(x - 1) - 2(x - 5) = x - 5$

P052) $2(3 - x) = 3(x - 4) + 15$

P053) $3(5 - x) - 3(1 - 2x) = 42$

P054) $(4x + 6) - 2x = (x - 6) + 10 + 14$

P055) $(x - 3) - (x + 2) + 2(x - 1) - 5 = 0$

P056) $3x - 2(4x - 3) = 2 - 3(x - 1)$

P057) $3(x - 1) - (x - 3) + 5(x - 2) = 18$

P058) $5(x - 3) - 4(x + 2) = 2 + 3(1 - 2x)$

P059) $3x - 7 = 2x + 5$

P060) $7x + 8 = 4x - 10$

P061) $2x - 4 - 8 = 4x$

P062) $3x = x + 1 + 7$

P063) $360 + 36x = 30x$

P064) $2x + 5 - 5x = -1$

P065) $5 + 6x = 5x + 2$

P066) $x + 2x - 1 - 3 = x$

P067) $-3x + 10 = 2x + 8 + 1$

P068) $5x - 5 + x = 9 + x$

P069) $7x - 4 - x = -2x + 8 - 3x$

P070) $-x - 5 + 4x = -7x + 6x + 15$

P072) $3x - 2x = 3x + 2$

P073) $2 - 4x = 32 - 18x + 12$

P074) $2x - 1 = -3 + x + 4$

P075) $3x - 2 - 2x - 3 = 0$

P076) $10 - 9x + 2x = 2 - 3x$

P077) $4x - 4 - 5x = -6 + 90$

P078) $2 - 3x = -2x + 12 - 3x$

P079) $7(x - 5) = 3(x + 1)$

P080) $3(x - 2) = 4(-x + 3)$

P082) $2(x + 1) - (x - 1) = 0$

P083) $5(x + 1) - 3(x + 2) = 0$

P084) $13 + 4(2x - 1) = 5(x + 2)$

P085) $4(x + 5) + 3(x + 5) = 21$

P086) $2(x + 5) - 3(5 - x) = 10$

P087) $8(x - 1) = 8 - 4(2x - 3)$

P088) $\frac{x}{8} - \frac{x}{6} = 3$

P099) $\frac{3x}{4} - \frac{x}{3} = 5$

P100) $\frac{x}{5} - 1 = 9$

P101) $\frac{x}{3} - 5 = 0$

P102) $\frac{x}{2} + \frac{3x}{5} = 6$

P103) $\frac{x}{5} + \frac{x}{2} = \frac{7}{10}$

P104) $5x - 10 = \frac{x+1}{2}$

P105) $\frac{8x-1}{2} - 2x = 3$

P106) $\frac{2x-7}{5} = \frac{x+2}{3}$

P107) $\frac{5x}{2} = 2x + \frac{x-2}{3}$

P108) $\frac{x-3}{4} - \frac{2x-1}{5} = 5$

P109) $\frac{x-1}{2} + \frac{x-3}{3} = 6$

P110) $\frac{5x-7}{2} = \frac{1}{2} + x$

P111) $\frac{2x-1}{3} = x - \frac{x-1}{5}$

P112) $\frac{x}{4} + \frac{3x-2}{2} = \frac{x-3}{2}$

P113) $\frac{2(x-1)}{3} = \frac{3x+6}{5}$

P114) $\frac{3(x-5)}{6} + \frac{2x}{4} = 7$

P115) $\frac{x}{5} - 2 = \frac{5(x-3)}{4}$

P116) $\frac{x}{2} - \frac{x}{4} = \frac{1}{2}$

P117) $\frac{x}{2} - \frac{x}{4} = 5$

P118) $\frac{x}{5} + \frac{x}{2} = \frac{7}{10}$

P119) $\frac{x}{5} + 1 = \frac{2x}{4}$

P120) $\frac{x}{2} + \frac{x}{3} = 1$

P121) $\frac{x}{3} + 4 = 2x$

P122) $\frac{x}{2} + 4 = \frac{1}{3}$

P123) $\frac{5x}{3} - \frac{2}{5} = 0$

P124) $x - 1 = 5 - \frac{x}{4}$

P125) $x + \frac{x}{2} = 15$

P126) $\frac{8x}{3} = 2x - 9$

P127) $\frac{x}{2} + \frac{3}{4} = \frac{1}{6}$

P128) $\frac{x}{2} - 7 = \frac{x}{4} + 5$

P129) $2x - \frac{1}{2} = 5x + \frac{1}{3}$

P130) $x - 1 = 5 - \frac{x}{4}$

P131) $\frac{x}{6} + \frac{x}{3} = 18 - \frac{x}{4}$

P132) $\frac{x}{4} + \frac{x}{8} + \frac{x}{6} = 26$

P134) $\frac{x}{8} + \frac{x}{5} = 17 - \frac{x}{10}$

P135) $\frac{x}{4} - \frac{x}{3} = 2x - 50$

P136) $\frac{5x}{2} + 7 = 2x + 4$

P137) $\frac{x}{2} + \frac{x}{3} = \frac{x+7}{3}$

P138) $\frac{x+2}{6} + \frac{x+1}{4} = 6$

P139) $\frac{x-2}{3} - \frac{x+1}{4} = 4$

P140) $\frac{x-1}{2} + \frac{x-2}{3} = \frac{x-3}{4}$

P141) $\frac{2x-3}{4} - \frac{1}{3} = \frac{-x+2}{2}$

P142) $\frac{2x-3}{4} - \frac{2-x}{3} = \frac{x-1}{3}$

P143) $\frac{3x-2}{4} = \frac{3x+3}{8}$

P144) $\frac{3x+5}{4} - \frac{2x-3}{3} = 3$

P145) $x + \frac{2(x-2)}{3} = \frac{5x}{4}$

P146) $\frac{2x+1}{4} - \frac{3(3-x)}{2} = \frac{56+x}{16}$

R000 RESPOSTAS

R021)

$$6x - 2x = 16$$

$$4x = 16$$

$$x = \frac{16}{4}$$

$$x = 4$$

R022)

$$2x - x = 1 + 5$$

$$x = 6$$

R023)

$$2x - x = 4 - 3$$

$$x = 1$$

R024)

$$5x - 4x = 10 - 7$$

$$x = 3 //$$

R025)

$$4x - 2x = 2 + 10$$

$$2x = 12$$

$$x = \frac{12}{2}$$

$$x = 6 //$$

R026)

$$4x - 8x = -2 + 7$$

$$-4x = 5$$

$$x = \frac{5}{-4} = -\frac{5}{4} //$$

R027)

$$2x - 4x = -7 - 1$$

$$-2x = -8 \times (-1)$$

$$2x = 8$$

$$x = \frac{8}{2}$$

$$x = 4 //$$

R028)

$$9x + 3x = 15 - 9$$

$$12x = 6$$

$$x = \frac{6}{12}$$

$$x = \frac{1}{2} //$$

R029)

$$16x - 12x = 3 + 1$$

$$4x = 4$$

$$x = \frac{4}{4}$$

$$x = 1$$

R030)

$$3x - 4x = 9 + 2$$

$$-x = 11 \quad x(-1)$$

$$x = -11 //$$

R031)

$$5x + x - 2x = 9 + 3$$

$$4x = 12$$

$$x = \frac{12}{4}$$

$$x = 3 //$$

R032)

$$17x - 7x - x = 18$$

$$9x = 18$$

$$x = \frac{18}{9}$$

$$x = 2 //$$

R033)

$$x + x + 2x = 17 + 1 + 4$$

$$4x = 22$$

$$x = \frac{22}{4}$$

$$x = \frac{11}{2} //$$

R034)

$$\begin{aligned}
 x + 2x - 5x - 4x &= -9 - 3 \\
 -6x &= -12 \\
 x &= \frac{-12}{-6} = 2 //
 \end{aligned}$$

R035)

$$\begin{aligned}
 5x + 6x - 3x - 2x &= -4 + 16 \\
 6x &= 12 \\
 x &= \frac{12}{6} \\
 x &= 2 //
 \end{aligned}$$

R036)

$$\begin{aligned}
 5x - 3x + 2x &= 4 - 4 \\
 4x &= 0 \\
 x &= \frac{0}{4} = 0 //
 \end{aligned}$$

R037)

$$\begin{aligned}
 4x - 1 &= 3x - 3 \\
 4x - 3x &= -3 + 1 \\
 x &= -2 //
 \end{aligned}$$

R038)

$$\begin{aligned}
 3x - 6 &= 2x - 4 \\
 3x - 2x &= -4 + 6 \\
 x &= 2 //
 \end{aligned}$$

R039)

$$\begin{aligned}
 2x - 2 &= 3x + 4 \\
 2x - 3x &= 4 + 2 \\
 -x &= 6 \times (-1) \\
 x &= -6 //
 \end{aligned}$$

R040)

$$\begin{aligned}
 3x - 3 - 7 &= 15 \\
 3x &= 15 + 3 + 7 \\
 3x &= 25 \\
 x &= \frac{25}{3} \\
 x &= 5 \frac{2}{3}
 \end{aligned}$$

R041)

$$\begin{aligned}
 7x - 28 &= 2x - 3 \\
 7x - 2x &= -3 + 28 \\
 5x &= 25 \\
 x &= \frac{25}{5} \\
 x &= 5
 \end{aligned}$$

R042)

$$\begin{aligned}
 3x - 6 &= 12 - 4x \\
 3x + 4x &= 12 + 6 \\
 7x &= 18 \\
 x &= \frac{18}{7}
 \end{aligned}$$

R043)

$$\begin{aligned}
 9x - 3 &= 6x + 4 \\
 9x - 6x &= 4 + 3 \\
 3x &= 7 \\
 x &= \frac{7}{3}
 \end{aligned}$$

R044)

$$\begin{aligned}
 7x - 14 &= 5x + 15 \\
 7x - 5x &= 15 + 14 \\
 2x &= 29 \\
 x &= \frac{29}{2}
 \end{aligned}$$

R045)

$$\begin{aligned}
 6x - 3 &= -2x - 6 \\
 6x + 2x &= -6 + 3 \\
 8x &= -3 \\
 x &= -\frac{3}{8} //
 \end{aligned}$$

R046)

$$\begin{aligned}
 5x - 3x - 6 &= 15 \\
 5x - 3x &= 15 + 6 \\
 2x &= 21 \\
 x &= \frac{21}{2} //
 \end{aligned}$$

R048)

$$\begin{aligned}
 2x + 3x + 9 &= 48 - 8x \\
 2x + 3x + 8x &= 48 - 9 \\
 13x &= 39 \\
 x &= \frac{39}{13} \\
 x &= 3 //
 \end{aligned}$$

R049)

$$\begin{aligned}
 4x + 40 - 2x + 10 &= 0 \\
 4x - 2x &= -40 - 10 \\
 2x &= -50 \\
 x &= \frac{-50}{2} \\
 x &= -25 //
 \end{aligned}$$

R050)

$$\begin{aligned}
 6x + 9 - 4x + 4 &= 3 \\
 6x - 4x &= 3 - 9 - 4 \\
 -2x &= -10 \\
 x &= \frac{-10}{-2} \\
 x &= 5 //
 \end{aligned}$$

R051)

$$\begin{aligned}
 7x - 7 - 2x + 10 &= x - 5 \\
 7x - 2x - x &= -5 + 7 - 10 \\
 4x &= -8 \\
 x &= \frac{-8}{4} \\
 x &= -2 //
 \end{aligned}$$

R052)

$$\begin{aligned}
 6 - 2x &= 3x - 12 + 15 \\
 -2x - 3x &= -12 + 15 - 6 \\
 -5x &= -3 \quad \times(-1) \\
 5x &= 3 \\
 x &= \frac{3}{5} //
 \end{aligned}$$

R053)

$$\begin{aligned}
 15 - 3x - 3 + 6x &= 42 \\
 -3x + 6x &= 42 - 15 + 3 \\
 3x &= 30 \\
 x &= \frac{30}{3} \\
 x &= 10 //
 \end{aligned}$$

R054)

$$\begin{aligned}
 4x + 6 - 2x &= x - 6 + 10 + 14 \\
 4x - 2x - x &= -6 + 10 + 14 - 6 \\
 x &= 12 //
 \end{aligned}$$

R055)

$$\begin{aligned}
 x - 3 - x - 2 + 2x - 2 - 5 &= 0 \\
 x - x + 2x &= 3 + 2 + 2 + 5 \\
 2x &= 12 \\
 x &= \frac{12}{2} \\
 x &= 6 //
 \end{aligned}$$

R056)

$$\begin{aligned}
 3x - 8x + 6 &= 2 - 3x + 3 \\
 3x - 8x + 3x &= 2 + 3 - 6 \\
 -2x &= -1 \times (-1) \\
 2x &= 1 \\
 x &= \frac{1}{2} //
 \end{aligned}$$

R057)

$$\begin{aligned}
 3x - 3 - x + 3 + 5x - 10 &= 18 \\
 3x - x + 5x &= 18 + 3 - 3 + 10 \\
 7x &= 28 \\
 x &= \frac{28}{7} \\
 x &= 4 //
 \end{aligned}$$

R058)

$$\begin{aligned}
 5x - 15 - 4x - 8 &= 2 + 3 - 6x \\
 5x - 4x + 6x &= 2 + 3 + 15 + 8 \\
 7x &= 28 \\
 x &= \frac{28}{7} \\
 x &= 4 //
 \end{aligned}$$

R059)

$$\begin{aligned}
 3x - 2x &= 5 + 7 \\
 x &= 12 //
 \end{aligned}$$

R060)

$$\begin{aligned}
 7x - 4x &= -10 - 8 \\
 3x &= -18 \\
 x &= \frac{-18}{3} \\
 x &= -6 //
 \end{aligned}$$

R061)

$$\begin{aligned}
 2x - 4x &= 4 + 8 \\
 -2x &= (2 \cdot (-1)) \\
 2x &= 12 \\
 x &= \frac{12}{2} \\
 x &= 6 //
 \end{aligned}$$

R062)

$$\begin{aligned}
 3x - x &= 1 + 7 \\
 2x &= 8 \\
 x &= \frac{8}{2} \\
 x &= 4 //
 \end{aligned}$$

R063)

$$\begin{aligned}
 36x - 30x &= -360 \\
 6x &= -360 \\
 x &= \frac{-360}{6} \\
 x &= -60 //
 \end{aligned}$$

R064)

$$\begin{aligned}
 2x - 5x &= -1 - 5 \\
 -3x &= -6 \times (-1) \\
 3x &= 6 \\
 x &= \frac{6}{3} \\
 x &= 2 //
 \end{aligned}$$

R065)

$$\begin{aligned}
 6x - 5x &= 2 - 5 \\
 x &= -3 //
 \end{aligned}$$

R066)

$$\begin{aligned}
 x + 2x - x &= 1 + 3 \\
 2x &= 4 \\
 x &= \frac{4}{2} \\
 x &= 2 //
 \end{aligned}$$

R067)

$$\begin{aligned}
 -3x - 2x &= 8 + 1 - 10 \\
 -5x &= -1 \times (-1) \\
 5x &= 1 \\
 x &= \frac{1}{5} //
 \end{aligned}$$

R068)

$$\begin{aligned}
 5x + x - x &= 9 + 5 \\
 5x &= 14 \\
 x &= \frac{14}{5} //
 \end{aligned}$$

R069)

$$\begin{aligned}
 7x - x + 2x + 3x &= 8 + 4 \\
 11x &= 12 \\
 x &= \frac{12}{11} //
 \end{aligned}$$

R071)

$$\begin{aligned}
 -x + 4x + 7x - 6x &= 15 + 5 \\
 4x &= 20 \\
 x &= \frac{20}{4} \\
 x &= 5 //
 \end{aligned}$$

R072)

$$\begin{aligned}
 3x - 2x - 3x &= 2 \\
 -2x &= 2 \times (-1) \\
 2x &= -2 \\
 x &= \frac{-2}{2} \\
 x &= -1 //
 \end{aligned}$$

R073)

$$\begin{aligned}
 -4x + 18x &= 32 + 12 - 2 \\
 14x &= 42 \\
 x &= \frac{42}{14} \\
 x &= 3 //
 \end{aligned}$$

R074)

$$\begin{aligned}
 2x - x &= -3 + 4 + 1 \\
 x &= 2 //
 \end{aligned}$$

R075)

$$\begin{aligned}
 3x - 2x &= 2 + 3 \\
 x &= 5 //
 \end{aligned}$$

R076)

$$\begin{aligned}
 -9x + 2x + 3x &= 2 - 10 \\
 -4x &= -8 \quad x(-1) \\
 4x &= 8 \\
 x &= \frac{8}{4} \\
 x &= 2 //
 \end{aligned}$$

R077)

$$\begin{aligned}
 4x - 5x &= -6 + 90 + 4 \\
 -x &= 88 \\
 x &= -88 //
 \end{aligned}$$

R078)

$$\begin{aligned}
 -3x + 2x + 3x &= 12 - 2 \\
 2x &= 10 \\
 x &= \frac{10}{2} \\
 x &= 5 //
 \end{aligned}$$

R079)

$$\begin{aligned}
 7x - 35 &= 3x + 1 \\
 7x - 3x &= 1 + 35 \\
 4x &= 36 \\
 x &= \frac{36}{4} \\
 x &= 9 //
 \end{aligned}$$

R081)

$$\begin{aligned}
 3x - 6 &= -4x + 12 \\
 3x + 4x &= 12 + 6 \\
 7x &= 18 \\
 x &= \frac{18}{7} //
 \end{aligned}$$

R082)

$$\begin{aligned}
 2x + 2 - x + 1 &= 0 \\
 2x - x &= -1 - 2 \\
 x &= -3 //
 \end{aligned}$$

R083)

$$\begin{aligned}
 5x + 5 - 3x - 6 &= 0 \\
 5x - 3x &= 6 - 5 \\
 2x &= 1 \\
 x &= \frac{1}{2} //
 \end{aligned}$$

R084)

$$\begin{aligned}
 13 + 8x - 4 &= 5x + 10 \\
 8x - 5x &= 10 - 13 + 4 \\
 3x &= 1 \\
 x &= \frac{1}{3} //
 \end{aligned}$$

R085)

$$\begin{aligned}
 4x + 20 + 3x + 15 &= 21 \\
 4x + 3x &= 21 - 20 - 15 \\
 7x &= -14 \\
 x &= \frac{-14}{7} \\
 x &= -2
 \end{aligned}$$

R086)

$$\begin{aligned}
 2x + 10 - 15 + 3x &= 10 \\
 2x + 3x &= 10 - 10 + 15 \\
 5x &= 15 \\
 x &= \frac{15}{5} \\
 x &= 3 //
 \end{aligned}$$

R087)

$$\begin{aligned}
 8x - 8 &= 8 - 8x + 12 \\
 8x + 8x &= 8 + 12 + 8 \\
 16x &= 28 \\
 x &= \frac{28}{16} \\
 x &= \frac{7}{4} //
 \end{aligned}$$

R088)

$$\begin{aligned}
 \frac{x}{4} - \frac{x}{6} &= \frac{3}{1} \quad \text{mmc}(4, 6, 1) = 12 \\
 \frac{3x}{12} - \frac{2x}{12} &= \frac{12 \cdot 3}{12} \\
 3x - 2x &= 36 \\
 x &= 36 //
 \end{aligned}$$

R099)

$$\begin{aligned}
 \frac{3x}{4} - \frac{x}{3} &= \frac{5}{1} \quad \text{mmc}(4, 3, 1) = 12 \\
 \frac{3 \cdot 3x}{12} - \frac{4 \cdot x}{12} &= \frac{12 \cdot 5}{12} \\
 9x - 4x &= 60 \\
 5x &= 60 \\
 x &= \frac{60}{5} \\
 x &= 12 //
 \end{aligned}$$

R100)

$$\frac{x}{5} - \frac{1}{1} = \frac{9}{1} \quad \text{mmc}(5,1,1) = 5$$

$$\frac{x}{5} - \frac{5.1}{5} = \frac{5.9}{5}$$

$$x - 5 = 45$$

$$x = 45 + 5$$

$$x = 50 //$$

R101)

$$\frac{x}{3} - \frac{5}{1} = \frac{0}{1} \quad \text{mmc}(3,1,1) = 3$$

$$\frac{x}{3} - \frac{3.5}{3} = \frac{3.0}{3}$$

$$x - 15 = 0$$

$$x = 15 //$$

R102)

$$\frac{x}{2} + \frac{3x}{5} = \frac{6}{1} \quad \text{mmc}(2,5,1) = 10$$

$$\frac{5.x}{10} + \frac{2.3x}{10} = \frac{10.6}{10}$$

$$5x + 6x = 60$$

$$11x = 60$$

$$x = \frac{60}{11} //$$

R103)

$$\text{mmc}(5, 2, 10) = 10$$

$$\frac{2x}{10} + \frac{5x}{10} = \frac{7}{10}$$

$$2x + 5x = 7$$

$$7x = 7$$

$$x = 1 //$$

R104)

$$\text{mmc}(1, 1, 2) = 2$$

$$\frac{2 \cdot 5x}{2} - \frac{2 \cdot 10}{2} = \frac{x+1}{2}$$

$$10x - 20 = x + 1$$

$$10x - x = 1 + 20$$

$$9x = 21$$

$$x = \frac{21}{9} //$$

$$\frac{8x-1}{2} - \frac{2x}{1} = \frac{3}{1} \quad \text{mmc}(2, 1, 1) = 2 \quad \text{R105)}$$

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

$$8x - 1 - 4x = 6$$

$$8x - 4x = 6 + 1$$

$$4x = 7$$

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

R106)

$$mmc(5,3) = 15$$

$$\frac{3(2x-7)}{15} = \frac{5(x+2)}{15}$$

$$6x-21 = 5x+10$$

$$6x-5x = 10+21$$

$$x = 31 //$$

R107)

$$\frac{5x}{2} = \frac{2x}{1} + \frac{x-2}{3} \quad mmc(2,1,3) = 6$$

$$\frac{3.5x}{6} = \frac{6.2x}{6} + \frac{2(x-2)}{6}$$

$$15x = 12x + 2x - 4$$

$$15x - 12x - 2x = -4$$

$$x = -4 //$$

R108)

$$\frac{x-3}{4} - \frac{2x-1}{5} = \frac{5}{1} \quad \text{mmc}(4, 5, 1) = 20$$

$$\frac{5(x-3)}{20} - \frac{4(2x-1)}{20} = \frac{20.5}{20}$$

$$5x - 15 - 8x + 4 = 100$$

$$5x - 8x = 100 + 15 - 4$$

$$-3x = 111 \times (-1)$$

$$3x = 111$$

$$x = \frac{111}{3} = 37 \frac{1}{3}$$

$$\frac{x-1}{2} + \frac{x-3}{3} = \frac{6}{1} \quad \text{mmc}(2, 3, 1) = 6 \quad \text{R109)$$

$$\frac{3(x-1)}{6} + \frac{2(x-3)}{6} = \frac{6.6}{6}$$

$$3x - 3 + 2x - 6 = 36$$

$$3x + 2x = 36 + 3 + 6$$

$$5x = 45$$

$$x = \frac{45}{5}$$

$$x = 9$$

R110)

$$\frac{5x+7}{2} = \frac{1}{2} + \frac{x}{1} \quad mmc(2, 1) = 2$$

$$\frac{5x+7}{2} = \frac{1}{2} + \frac{2x}{2}$$

$$5x+7 = 1+2x$$

$$5x-2x = 1+7$$

$$3x = 8$$

$$x = \frac{8}{3} //$$

R111)

$$\frac{2x-1}{3} = \frac{x}{1} - \frac{x-1}{5} \quad mmc(3, 1, 5) = 15$$

$$\frac{5(2x-1)}{15} = \frac{15 \cdot x}{15} - \frac{3(x-1)}{15}$$

$$10x-5 = 15x-3x+3$$

$$10x-15x+3x = 3+5$$

$$-2x = 8 \times (-1)$$

$$2x = -8$$

$$x = \frac{-8}{2}$$

$$x = -4 //$$

R112)

$$\begin{aligned}
 \text{mmc}(4, 2, 2) &= 4 \\
 \frac{1 \cdot x}{4} + \frac{2(3x-2)}{4} &= \frac{2(x-3)}{4} \\
 x + 6x - 4 &= 2x - 6 \\
 x + 6x - 2x &= -6 + 4 \\
 5x &= -2 \\
 x &= -\frac{2}{5} //
 \end{aligned}$$

R113)

$$\begin{aligned}
 \text{mmc}(3, 5) &= 15 \\
 \frac{5 \cdot 2(x-1)}{15} &= \frac{3(3x+6)}{15} \\
 10x - 10 &= 9x + 18 \\
 10x - 9x &= 18 + 10 \\
 x &= 28 //
 \end{aligned}$$

R114)

$$\frac{3(x-5)}{6} + \frac{2x}{4} = \frac{7}{1} \quad mmc(6,4,1) = 12$$

$$\left. \begin{array}{l} \frac{2 \cdot 3(x-5)}{12} + \frac{3 \cdot 2x}{12} = \frac{12 \cdot 7}{12} \\ 6x - 30 + 6x = 84 \\ 6x + 6x = 84 + 30 \\ 12x = 114 \end{array} \right\} \begin{array}{l} x = \frac{114}{12} \\ x = \frac{57}{6} \end{array}$$

R115)

$$\frac{x}{5} - \frac{2}{1} = \frac{5(x-3)}{4} \quad mmc(5,1,4) = 20$$

$$\left. \begin{array}{l} \frac{4x}{20} - \frac{20 \cdot 2}{20} = \frac{5.5(x-3)}{20} \\ 4x - 40 = 25x - 75 \\ 4x - 25x = -75 + 40 \\ -21x = -35 \times (-1) \\ 21x = 35 \end{array} \right\} x = \frac{35}{21} //$$

R116)

$$mmc(2,4,2) = 4$$

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

$$2x - x = 2$$

$$x = 2 //$$

R117)

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

$$mmc(2, 4, 1) = 4$$

$$\frac{2x}{4} - \frac{x}{4} = \frac{4.5}{4}$$

$$2x - x = 20$$

$$x = 20 //$$

R118)

$$mmc(5, 2, 10) = 10$$

$$\frac{2 \cdot x}{10} + \frac{5 \cdot x}{10} = \frac{1.7}{10}$$

$$2x + 5x = 7$$

$$7x = 7$$

$$x = \frac{7}{7}$$

$$x = 1 //$$

R119)

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

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

$$3x + 15 = 10x$$

$$3x - 10x = -15$$

$$-7x = -15$$

$$7x = 15$$

$$x = \frac{15}{7}$$

R120)

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

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

$$5x = 6$$

$$x = \frac{6}{5} \\ 5//$$

R121)

$$\frac{x}{3} + \frac{4}{1} = \frac{2x}{1}$$

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

$$x + 12 = 6x$$

$$x - 6x = -12$$

$$-5x = -12 \times (-1)$$

$$5x = 12$$

$$x = \frac{12}{5}$$

R122)

$$\frac{x}{2} + \frac{4}{1} = \frac{1}{3}$$

$$\frac{3x}{6} + \frac{6 \cdot 4}{6} = \frac{2 \cdot 1}{6}$$

$$3x + 24 = 2$$

$$3x = 2 - 24$$

$$3x = -22$$

$$x = -\frac{22}{3}$$

R123)

$$\frac{5x}{5} - \frac{2}{5} = \frac{0}{1}$$

$$\frac{5.5x}{15} - \frac{3.2}{15} = \frac{15.0}{15}$$

$$25x - 6 = 0$$

$$\begin{aligned} 25x &= 6 \\ x &= \frac{6}{25} \end{aligned}$$

R124)

$$\frac{x}{1} - \frac{1}{1} = \frac{5}{1} - \frac{x}{4}$$

$$\frac{4x}{4} - \frac{4}{4} = \frac{4.5}{4} - \frac{x}{4}$$

$$4x - 4 = 20 - x$$

$$4x + x = 20 + 4$$

$$5x = 24$$

$$x = \frac{24}{5}$$

R125)

$$\frac{x}{1} + \frac{x}{2} = \frac{15}{1}$$

$$\frac{2x}{2} + \frac{x}{2} = \frac{2 \cdot 15}{2}$$

$$2x + x = 30$$

$$3x = 30$$

$$x = \frac{30}{3}$$

$$x = 10 //$$

R126)

$$\frac{8x}{3} = \frac{2x}{1} - \frac{9}{1}$$

$$\frac{8x}{3} = \frac{3 \cdot 2x}{3} - \frac{3 \cdot 9}{3}$$

$$8x = 6x - 27$$

$$8x - 6x = -27$$

$$2x = -\underline{27}$$

$$x = -\frac{27}{2} //$$

R127)

$$\text{mmc}(2,4,6) = 12$$

$$\frac{6 \cdot x}{12} + \frac{3 \cdot 3}{12} = \frac{2 \cdot 1}{12}$$

$$6x + 9 = 2$$

$$6x = 2 - 9$$

$$6x = -7$$

$$x = \frac{-7}{6} //$$

R128)

$$\frac{x}{2} - \frac{7}{1} = \frac{x}{4} + \frac{5}{1}$$

$$\frac{2 \cdot x}{4} - \frac{4 \cdot 7}{4} = \frac{1 \cdot x}{4} + \frac{4 \cdot 5}{4}$$

$$2x - 28 = x + 20$$

$$2x - x = 20 + 28$$

$$x = 48 //$$

R129)

$$\frac{2x}{1} - \frac{1}{2} = \frac{5x}{1} + \frac{1}{3} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} x = -\frac{5}{18} //$$

$$\frac{6 \cdot 2x}{6} - \frac{3 \cdot 1}{6} = \frac{6 \cdot 5x}{6} + \frac{2 \cdot 1}{6}$$

$$12x - 3 = 30x + 2$$

$$12x - 30x = 2 + 3$$

$$-18x = 5 \times (-1)$$

$$18x = -5$$

R130)

$$\frac{x}{1} - \frac{1}{1} = \frac{5}{1} - \frac{x}{4}$$

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

$$4x - 4 = 20 - x$$

$$4x + x = 20 + 4$$

$$5x = 24$$

$$x = \frac{24}{5}$$

R131)

$$\frac{x}{6} + \frac{x}{3} = \frac{18}{1} - \frac{x}{4}$$

$$\frac{2 \cdot x}{12} + \frac{4 \cdot x}{12} = \frac{12 \cdot 18}{12} - \frac{3 \cdot x}{12}$$

$$2x + 4x = 216 - 3x$$

$$2x + 4x + 3x = 216$$

$$9x = 216$$

$$x = \frac{216}{9}$$

$$x = 24 //$$

R133)

$$\frac{x}{4} + \frac{x}{8} + \frac{x}{6} = \frac{26}{1}$$

$$\frac{6 \cdot x}{24} + \frac{3 \cdot x}{24} + \frac{4 \cdot x}{24} = \frac{24 \cdot 26}{24}$$

$$6x + 3x + 4x = 624$$

$$13x = 624$$

$$x = \frac{624}{13}$$

$$x = 48 //$$

R134)

$$\frac{x}{8} + \frac{x}{5} = \frac{17}{1} - \frac{x}{10}$$

$$\frac{5x}{40} + \frac{8x}{40} = \frac{40 \cdot 17}{40} - \frac{4x}{40}$$

$$5x + 8x = 680 - 4x$$

$$5x + 8x + 4x = 680$$

$$17x = 680$$

$$x = \frac{680}{17} = 40\%$$

R135)

$$\frac{x}{4} - \frac{x}{3} = \frac{2x}{1} - \frac{50}{1}$$

$$\frac{3x}{12} - \frac{4x}{12} = \frac{12 \cdot 2x}{12} - \frac{12 \cdot 50}{12}$$

$$3x - 4x = 24x - 600$$

$$3x - 4x - 24x = -600$$

$$-25x = -600 \times (-1)$$

$$25x = 600$$

$$x = \frac{600}{25}$$

$$x = 24\%$$

R136)

$$\frac{5x}{2} + \frac{7}{1} = \frac{2x}{1} + \frac{4}{1}$$

$$\frac{5x}{2} + \frac{2 \cdot 7}{2} = \frac{2 \cdot 2x}{2} + \frac{2 \cdot 4}{2}$$

$$5x + 14 = 4x + 8$$

$$5x - 4x = 8 - 14$$

$$x = -6 \\ //$$

$$\frac{3x}{6} + \frac{2x}{6} = \frac{2(x+7)}{6} \quad \text{R137)}$$

$$3x + 2x = 2x + 14$$

$$3x + 2x - 2x = 14$$

$$3x = 14$$

$$x = \frac{14}{3} \\ //$$

R138)

$$\frac{x+2}{6} + \frac{x+1}{4} = \frac{6}{1}$$

$$\frac{4 \cdot (x+2)}{24} + \frac{6(x+1)}{24} = \frac{24 \cdot 6}{24}$$

$$4x + 8 + 6x + 6 = 144$$

$$4x + 6x = 144 - 8 - 6$$

$$10x = 130$$

$$x = \frac{130}{10} = 13 \\ //$$

R139)

$$\frac{x-2}{3} - \frac{x+1}{4} = \frac{4}{1}$$

$$\frac{4(x-2)}{12} - \frac{3(x+1)}{12} = \frac{12 \cdot 4}{12}$$

$$4x - 8 - 3x - 3 = 48$$

$$4x - 3x = 48 + 8 + 3$$

$$x = 59 //$$

R140)

$$\frac{6(x-1)}{12} + \frac{4(x-2)}{12} = \frac{3(x-3)}{12}$$

$$6x - 6 + 4x - 8 = 3x - 9$$

$$6x + 4x - 3x = -9 + 6 + 8$$

$$7x = 5$$

$$x = \frac{5}{7} //$$

R141)

$$\frac{3(2x-3)}{12} - \frac{4 \cdot 1}{12} = \frac{6(-x+2)}{12}$$

$$6x - 9 - 4 = -6x + 12$$

$$6x + 6x = 12 + 9 + 4$$

$$12x = 25$$

$$x = \frac{25}{12} //$$

R142)

$$\frac{3(2x-3)}{12} - \frac{4(2-x)}{12} = \frac{4(x-1)}{12}$$

$$6x - 9 - 8 + 4x = 4x - 4$$

$$6x + 4x - 4x = -4 + 9 + 8$$

$$6x = 13$$

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

R143)

$$\frac{2(3x-2)}{8} - \frac{3x+3}{8}$$

$$6x - 4 = 3x + 3$$

$$6x - 3x = 3 + 4$$

$$3x = 7$$

$$x = \frac{7}{3} //$$

R144)

$$\frac{3(3x+5)}{12} - \frac{4(2x-3)}{12} = \frac{12 \cdot 3}{12}$$

$$9x + 15 - 8x + 12 = 36$$

$$9x - 8x = 36 - 15 - 12$$

$$x = 9 //$$

R145)

$$\frac{x}{1} + \frac{2(x-2)}{3} = \frac{5x}{4}$$

$$\frac{12x}{12} + \frac{4 \cdot 2(x-2)}{12} - \frac{3 \cdot 5x}{12}$$

$$12x + 8(x-2) = 15x$$

$$12x + 8x - 16 = 15x$$

$$12x + 8x - 15x = 16$$

$$5x = 16$$

$$x = \frac{16}{5} //$$

R146)

$$\frac{4(2x+1)}{16} - \frac{8 \cdot 3(3-x)}{16} = \frac{56+x}{16}$$

$$8x + 4 - 24(3-x) = 56 + x$$

$$8x + 4 - 72 + 24x = 56 + x$$

$$8x + 24x - x = 56 - 4 + 72$$

$$31x = 124$$

$$x = \frac{124}{31} //$$