

$$1. \quad U = 2a + 2b$$

$$a = \frac{U}{2} - b$$

$$2. \quad d_1 = d_2 - 2m$$

$$d_2 = d_1 + 2m \quad m = \frac{d_2 - d_1}{2}$$

$$3. \quad k = \frac{D-d}{l}$$

$$D = kl + d \quad d = D - kl$$

$$4. \quad A = \frac{a_1 + a_2}{2} h$$

$$h = \frac{2A}{a_1 + a_2} \quad a_1 = \frac{2A}{h} - a_2$$

$$5. \quad \eta = \frac{1}{1-m}$$

$$m = 1 - \frac{1}{\eta}$$

$$6. \quad M = \frac{a-b}{a+b}$$

$$a = \frac{1+M}{1-M} b \quad b = \frac{1-M}{1+M} a$$

$$7. \quad \frac{1}{a} = \frac{1}{b} + \frac{1}{c}$$

$$b = \frac{ac}{a+c} \quad c = \frac{ab}{a-b}$$

$$8. \quad A = \frac{ax + by}{2}$$

$$b = \frac{2A - ax}{y}$$

$$9. \quad r = \frac{h}{2} + \frac{sa}{8h}$$

$$s = \frac{8hr}{a} - \frac{4h^2}{a}$$

$$10. \quad A = \frac{\pi m}{2} (D + d)$$

$$d = \frac{2A}{\pi m} - D$$

$$11. \quad T_m = \frac{m_1 T_1 + m_2 T_2}{m_1 + m_2}$$

$$m_1 = \frac{T_2 - T_m}{T_m - T_1} m_2$$

$$T_1 = \left(1 + \frac{m_2}{m_1}\right) T_m - \frac{m_2}{m_1} T_2$$

$$12. \quad Q = m c (T_2 - T_1)$$

$$m = \frac{Q}{c (T_2 - T_1)}$$

$$T_1 = T_2 - \frac{Q}{m c}$$

$$13. \quad a = \frac{2(vt - s)}{t^2}$$

$$s = vt - \frac{1}{2} a t^2$$

$$14. \quad l_w = l_k + l_k \alpha (T_2 - T_1)$$

$$l_k = \frac{l_w}{1 + \alpha (T_2 - T_1)}$$

$$T_2 = T_1 + \frac{l_w - l_k}{\alpha l_k}$$

$$T_1 = T_2 - \frac{l_w - l_k}{\alpha l_k}$$

$$15. \quad \frac{6 \cdot c}{7} + \frac{3 \cdot c}{7} - \frac{4 \cdot c}{7} + \frac{8 \cdot c}{7} = \frac{13 \cdot c}{7}$$

$$16. \quad 13\frac{1}{4} \cdot f y - 15\frac{2}{3} \cdot f y + 8\frac{1}{6} \cdot f y = 5\frac{3}{4} \cdot f y$$

$$17. \quad 570 \text{ g} + 5\frac{1}{10} \text{ kg} - 16 \text{ g} = 5\frac{654}{1000} \text{ kg}$$

$$18. \quad 2,3 \text{ kg} - 150 \text{ g} - 0,66 \text{ kg} = 1\frac{49}{100} \text{ kg}$$

$$19. \quad \frac{2}{4} m + (11 + 7\frac{1}{2} m) - 5 = 8 m + 6$$

$$20. \quad \frac{1}{4} r + \frac{2}{3} d - (\frac{5}{8} r - \frac{7}{10} d - \frac{3}{5} f) =$$

$$-\frac{3}{8} r + \frac{41}{30} d + \frac{3}{5} f$$

$$21. \quad 4\frac{1}{7} j \cdot \frac{m}{5} = \frac{29}{35} m j$$

$$22. \quad \frac{r}{3} [-(-\frac{d}{5})] \cdot \frac{f}{9} = \frac{1}{135} r d f$$

$$23. \quad (2\frac{1}{3} r + 4\frac{1}{3} d) \cdot 3\frac{2}{7} f = 7\frac{2}{3} r f + 14\frac{5}{21} d f$$

$$24. \quad f \cdot x + f \cdot z = f \cdot (x + z)$$

$$25. \quad s \cdot x - s = s \cdot (x - 1)$$

$$26. \quad -\frac{18 q y}{-3 t w} = 6 \frac{q y}{t w}$$

$$27. \quad \frac{w-7}{7-w} = -1$$

$$28. \quad 3\frac{7}{8} = x + 1\frac{3}{4} \quad x = 2\frac{1}{8}$$

$$29. \quad x + 7 = 5 \cdot x - (6 - 13 \cdot x) \quad x = \frac{13}{17}$$

$$30. \quad (5x + 6) \cdot 7 = 3 \cdot [-9 \cdot (8x - 5)]$$

$$x = \frac{93}{251}$$

$$31. \quad a + 2b - \{ -[-(a+b) - (2a-4b) - a + (3a-b) - (2a-5b)] + [(2a-b) - (b+2a)] \} = 11b - 2a$$

$$32. \quad \frac{100 \cdot a \cdot c}{9 \cdot b^3} \cdot \frac{33 \cdot b \cdot c}{1000 \cdot a^2} \cdot \frac{a}{5} = \frac{11}{150} \frac{c^2}{b^2}$$

$$33. \quad \frac{x-y}{x+1} + \frac{x-y}{3 \cdot x+3} - \frac{x+y}{9 \cdot x+9} = \frac{11x-13y}{9(x+1)}$$

Hilfen zur Wiederholung:

- Mathematikbuch: z. B.: Kusch, Mathematik 1, Cornelsen Verlag sowie Lösungsband
- Serlo Mathematik: <https://de.serlo.org/mathe>
- Mathegym: <https://www.mathegym.de/> (evtl. Nachfrage bei der Mathematiklehrkraft)