STACK — Yhtälö

1)
$$10x + 9 = 1x + 4$$
$$10x - 1x = 4 - 9$$
$$9x = -5 \quad \| : 9$$
$$x = -\frac{5}{9}$$

2)
$$11x - H = Mx + 6$$
$$11x - Mx = 6 + H \quad \| : 11 - M$$
$$x = \frac{6+H}{11-M}$$

3)
$$\frac{6x}{2+5} = \frac{3}{6}$$
$$36x = 3x + 15$$
$$36x - 3x = 15$$
$$33x = 15 \quad \| : 33$$
$$x = \frac{15}{33} = \frac{5}{11}$$

4)
$$\frac{8x-7}{4} - x = 5x + \frac{3}{3} \quad \| \cdot 4$$
$$8x - 7 - 4x = 20x + 4$$
$$8x - 4x - 20x = 4 + 7$$
$$-16x = 11 \quad \| : -16$$
$$x = -\frac{11}{16} = -0,6875 \approx -0,688$$

5)
$$\frac{4x-9}{2} - x = 7 - \frac{8-x}{2} \quad \| \cdot 2$$
$$4x - 9 - 2x = 14 - 8 + x$$
$$4x - 2x - x = 14 - 8 + 9$$
$$x = 15$$

6)
$$T = \frac{1}{2} av \quad \| \cdot 2$$
$$2T = av \quad \| : v$$
$$\frac{2T}{v} = a$$

7)
$$B = \frac{4\pi}{b+e}$$
$$B(b+e) = 4\pi$$
$$Bb + Be = 4\pi$$
$$Bb = 4\pi - Be \quad \| : B$$
$$b = \frac{4\pi - Be}{B}$$
$$= \frac{4\pi}{B} - \frac{Be}{B}$$
$$= \frac{4\pi}{B} - e$$

8)
$$E = \frac{nG}{J + nk}$$
$$E(J + nk) = nG$$
$$EJ + Enk = nG$$
$$EJ = nG - Enk$$
$$EJ = n(G - Ek)$$
$$n = \frac{EJ}{G - Ek}$$