Solutions 1-4

1. $\frac{z-1}{4z+2}=\frac{3}{14} \quad \left|\cdot 14\cdot(2z+1)\right. \qquad G=\mathbb{R}\setminus\{-0.5\}$

$$7z-7=6z+3 \quad \left|-6z+7\right.$$
$$z=10$$

2. $\frac{8}{x-3}=4 \quad \left|\cdot(x-3)\right. \qquad G=\mathbb{R}\setminus\{3\}$

$$8=4x-12 \quad \left|+12\right.$$
$$20=4x \quad \left|\div 4\right.$$
$$x=5$$

3. $\frac{9x}{25-x}=6 \quad \left|\cdot(25-x)\right. \qquad G=\mathbb{R}\setminus\{25\}$

$$9x=150-6x \quad \left|+6x\right.$$
$$15x=150 \quad \left|\div 15\right.$$
$$x=10$$

4. $\frac{2x}{x+1}+\frac{3}{2x}=2-\frac{1}{x} \quad \left|\cdot 2x\cdot(x+1)\right. \qquad G=\mathbb{R}\setminus\{0;-1\}$

$$\cancel{4x^2}+3x+3=\cancel{4x^2}+4x-2x-2 \quad \left|-4x^2-2x-3\right.$$
$$x=-5$$