

Quiz 10

$$\begin{aligned} \boxed{1} \quad -2 < \frac{6-3x}{3} \leq 2 &\Rightarrow -6 < 6-3x \leq 6 \\ \Rightarrow -12 < -3x \leq 0 &\Rightarrow 4 > x \geq 0 \Rightarrow \\ &[0, 4) \end{aligned}$$

$$\boxed{2} \quad x^2 + 2x \leq 8 \Rightarrow x^2 + 2x - 8 \leq 0$$

$(x+4)(x-2)$

$$\begin{array}{c} \text{+} \quad \text{---} \quad \text{---} \quad \text{+} \\ | \quad \quad | \\ -4 \quad \quad 2 \end{array} \quad [-4, 2]$$

$$\boxed{3} \quad 2 > \frac{4}{x+1} \Rightarrow 2 - \frac{4}{x+1} > 0 \Rightarrow$$

$$\frac{2(x+1) - 4}{x+1} > 0 \Rightarrow \frac{2x-2}{x+1} > 0$$

$$\begin{array}{c} \text{+} \quad \text{---} \quad \text{---} \quad \text{+} \\ | \quad \quad | \\ -1 \quad \quad 1 \end{array} \Rightarrow$$

$$(-\infty, -1) \cup (1, \infty)$$