

(A) 不等式 4

次の不等式を解きなさい。

(1) $4x - 6 \leq 2x < 5x + 3$

$$\begin{array}{l} 4x - 6 \leq 2x \\ 2x \leq 6 \\ x \leq 3 \end{array} \quad \begin{array}{l} 2x < 5x + 3 \\ -3x < 3 \\ x > -1 \end{array}$$

$$\underline{-1 < x \leq 3}$$

(2) $\begin{cases} 2x - 7 < 5x + 8 \\ 8x + 3 \leq 3x - 7 \end{cases}$

$$\begin{array}{l} -3x < 15 \\ x > -5 \end{array} \quad \begin{array}{l} 5x \leq -10 \\ x \leq -2 \end{array}$$

$$\underline{-5 < x \leq -2}$$

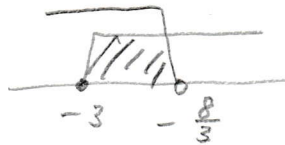
(3) $3x < x + 12 \leq 2x + 8$

$$\begin{array}{l} 3x < x + 12 \\ 2x < 12 \\ x < 6 \end{array} \quad \begin{array}{l} x + 12 \leq 2x + 8 \\ -x \leq -4 \\ x \geq 4 \end{array}$$

$$\underline{4 \leq x < 6}$$

(4) $\begin{cases} 5x + 2 \geq 4x - 1 \\ 5x - 3 > 8x + 5 \end{cases}$

$$\begin{array}{l} x \geq -3 \\ -3x > 8 \\ x < -\frac{8}{3} \end{array}$$

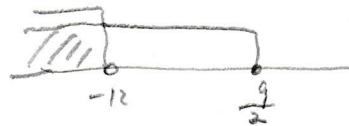


$$\underline{-3 \leq x < -\frac{8}{3}}$$

(5) $\begin{cases} (\frac{1}{2}x + 2 \geq x - \frac{1}{4}) \times 4 \\ 0.5x - 2 > 0.7x + 0.4 \end{cases}$

$$\begin{array}{l} 2x + 8 \geq 4x - 1 \\ -2x \geq -9 \\ x \leq \frac{9}{2} \end{array}$$

$$\begin{array}{l} 5x - 20 > 7x + 4 \\ -2x > 24 \\ x < -12 \end{array}$$



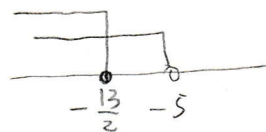
$$\underline{x < -12}$$

(6) $8(x + 2) < 5x + 1 \leq 3(x - 4)$

$$8x + 16 < 5x + 1 \leq 3x - 12$$

$$\begin{array}{l} 8x + 16 < 5x + 1 \\ 3x < -15 \\ x < -5 \end{array}$$

$$\begin{array}{l} 5x + 1 \leq 3x - 12 \\ 2x \leq -13 \\ x \leq -\frac{13}{2} \end{array}$$



$$\underline{x \leq -\frac{13}{2}}$$