12 (A) $7 + 3x \geq 4x - 3 \quad | -3x$

$7 \geq x - 3 \quad | +3$

$10 \geq x$

$G = \mathbb{N}_0$: $\mathbb{L} = \{0; 1; 2; \ldots; 9; 10\}$

$G = \mathbb{Z}_0$: $\mathbb{L} = \{\ldots; -1; 0; 1; 2; \ldots; 9; 10\}$

$G = \mathbb{Q}$: $\mathbb{L} = \{x \mid x \leq 10\}$

(B) $10 - 3x \geq 5(x - 3)$

$10 - 3x \geq 5x - 15 \quad | +3x$

$10 \geq 8x - 15 \quad | +15$

$25 \geq 8x \quad | :8$

$\frac{25}{8} \geq x$

$G = \mathbb{N}_0$: $\mathbb{L} = \{0; 1; 2; 3\}$

$G = \mathbb{Z}$: $\mathbb{L} = \{\ldots; -1; 0; 1; 2; 3\}$

$G = \mathbb{Q}$: $\mathbb{L} = \{x \mid x \leq \frac{25}{8}\}$

(C) $2x^2 < 27 \quad | :2$

$x^2 < 13{,}5 \quad | \sqrt{\ }$

$x < \sqrt{13{,}5}$

$G = \mathbb{N}_0$: $\mathbb{L} = \{0; 1; 2; 3\}$

$G = \mathbb{Z}$: $\mathbb{L} = \{-3; -2; -1; 0; 1; 2; 3\}$

$G = \mathbb{Q}$: $\mathbb{L} = \{x \mid x < \sqrt{13{,}5} \wedge x > -\sqrt{13{,}5}\}$

(D) $(8x+6) : 2 < 15$

$4x + 3 < 15 \quad | -3$

$4x < 12 \quad | : 4$

$x < 3$

$G = \mathbb{N}_0$: $\mathbb{L} = \{0; 1; 2\}$

$G = \mathbb{Z}$: $\mathbb{L} = \{\ldots; -1; 0; 1; 2\}$

$G = \mathbb{Q}$: $\mathbb{L} = \{x \mid x < 3\}$

(E) $5x \geq x^2 \quad | : x$

$5 \geq x$

$G = \mathbb{N}_0$: $\mathbb{L} = \{0; 1; 2; 3; 4; 5\}$

$G = \mathbb{Z}$: $\mathbb{L} = \{-5; -4; \ldots; 0; 1; \ldots; 5\}$

$G = \mathbb{Q}$: $\mathbb{L} = \{x \mid x \leq 5 \wedge x \geq -5\}$

(F) $x^2 - x < 50$

$x \cdot (x-1) < 50$

$G = \mathbb{N}_0$: $\mathbb{L} = \{0; 1; 2; \ldots; 7\}$

$G = \mathbb{Z}$: $\mathbb{L} = \{-6; -5; \ldots; 0; 1; \ldots; 7\}$

$G = \mathbb{Q}$: $\mathbb{L} = \{x \mid -6 \leq x \leq 7\}$

(G) $100 - 3x^2 \geq 0 \quad | +3x^2$

$100 \geq 3x^2 \quad | :3$

$\frac{100}{3} \geq x^2 \quad | \sqrt{\ }$

$\sqrt{\frac{100}{3}} \geq x$

$G = \mathbb{N}_0$: $\mathbb{L} = \{0; 1; 2; \ldots; 5\}$

$G = \mathbb{Z}$: $\mathbb{L} = \{-5; -4; \ldots; 0; 1; \ldots; 5\}$

$G = \mathbb{Q}$: $\mathbb{L} = \left\{ -\sqrt{\frac{100}{3}} \leq x \leq \sqrt{\frac{100}{3}} \right\}$

(H) $10x - 5x^2 > 0 \quad | :x$

$10 - 5x > 0 \quad | +5x$

$10 > 5x \quad | :5$

$2 > x$

$G = \mathbb{N}_0$: $\mathbb{L} = \{0; 1\}$

$G = \mathbb{Z}$: $\mathbb{L} = \{0; 1\}$

$G = \mathbb{Q}$: $\mathbb{L} = \{x \mid x < 2 \wedge x > 0\}$