

次の各1次関数において x の変域が()内に示してある。そのときの y の変域を求めよ。

(1) $y = 3x + 1$ ($-1 \leq x$)

$$y = 3 \times (-1) + 1 = -2$$
$$\therefore y \geq -2$$

(2) $y = -2x + 2$ ($x \leq 3$)

$$y = -2 \times 3 + 2 = -4$$
$$\therefore y \geq -4$$

(3) $y = x - 4$ ($x \leq -2$)

$$y = -2 - 4 = -6$$
$$\therefore y \leq -6$$

(4) $y = -x + 2$ ($2 \leq x$)

$$y = -2 + 2 = 0$$
$$\therefore y \leq 0$$

(5) $y = 3x + 12$ ($-1 \leq x \leq 2$)

$$y = 3 \times (-1) + 12 = 9$$
$$y = 3 \times 2 + 12 = 18$$
$$\therefore 9 \leq y \leq 18$$

(6) $y = -5x + 8$ ($-2 \leq x \leq 3$)

$$y = -5 \times (-2) + 8 = 18$$
$$y = -5 \times 3 + 8 = -7$$
$$\therefore -7 \leq y \leq 18$$