(47.) Slope

$0 < x < 1$ $(\overline{OA})$ $\quad \frac{\text{rise}}{\text{run}} = \frac{3}{1} = 3$

$1 < x < 3$ $(\overline{AB})$ $\quad \frac{\text{rise}}{\text{run}} = \frac{1}{2} = \frac{1}{2}$

$3 < x < 7$ $(\overline{BC})$ $\quad \frac{\text{rise}}{\text{run}} = \frac{-2}{4} = -\frac{1}{2}$

$7 < x < 9$ $(\overline{CD})$ $\quad \frac{\text{rise}}{\text{run}} = \frac{0}{2} = 0$

$9 < x < 10$ $(\overline{DE})$ $\quad \frac{\text{rise}}{\text{run}} = \frac{-2}{1} = -2$

(48) Equation of Line $(y = \overbrace{m}^{\text{slope}}x + \overbrace{b}^{y\text{-intercept}})$

$\overline{OA}$ slope = 3 $\quad y = 3x + b$

pt on line — $(0, 0)$

$0 = 3(0) + b$

$b = 0$

$y = 3x$

$\overline{AB}$ slope = $\frac{1}{2}$ $\quad y = \frac{1}{2}x + b$

pt on line — $(1, 3)$

$3 = \frac{1}{2}(1) + b$

$\frac{5}{2} = b$

$y = \frac{1}{2}x + \frac{5}{2}$

$\overline{BC}$ slope = $\frac{1}{2}$ $\quad y = \frac{-1}{2}x + b$

pt on line — $(3, 4)$

$4 = \frac{-1}{2}(3) + b$

$\frac{11}{2} = b$

$y = \frac{-1}{2}x + \frac{11}{2}$