

~~21.~~
21. (a) + slope: ↗ increasing left to right

(b) - slope: ↘ decreasing left to right

(c) 0 slope: ↔ horizontal line

(d) undefined slope: ↕ vertical line (Not a function)

$$22. m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{1 - (-5)}{2 - 1} = \frac{6}{1} = 6$$

pt: (1, -5) pt-slope form: $y - y_1 = m(x - x_1)$

~~*~~ $y + 5 = 6(x - 1)$

$$y + 5 = 6x - 6$$

$$y = 6x - 11$$

$$\boxed{f(x) = 6x - 11}$$

↘ function notation

23. Domain: # of minutes ($x \geq 0$, multiples of 45)

Range: Loads of laundry ($y \geq 0$, whole #s only)

24. 7, 10, 13, 16, 19, ...

$$a_1 = 7 \quad d = 10 - 7 = 3$$

$$a_n = a_1 + d(n - 1)$$

$$a_n = 7 + 3(n - 1)$$

$$a_{15} = 7 + 3(15 - 1)$$

$$= 7 + 3(14)$$

$$= 7 + 42$$

$$\boxed{a_{15} = 49}$$

25. 9, 5, 1, -3, -7, ...

$$a_1 = 9 \quad d = 5 - 9 = -4$$

$$a_n = a_1 + d(n - 1)$$

$$\boxed{a_n = 9 - 4(n - 1)}$$