

$$10. y = -\frac{1}{2}x + 3$$

Slope: $m = -\frac{1}{2}$ y-intercept: $(0, 3)$

11. Arithmetic Sequences increase at a constant rate, called the "common difference" and linear equations increase at a constant rate called "slope".

$$12. m = -2 \quad \text{pt: } (-1, 4)$$

point-slope form: $y - y_1 = m(x - x_1)$

$$\boxed{y - 4 = -2(x + 1)}$$

$$13. f(x) = \frac{1}{2}(4x - 2) + 1$$

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

$$= \frac{1}{2}(8 - 2) + 1$$

$$= \frac{1}{2}(6) + 1$$

$$= 3 + 1$$

$$\boxed{f(2) = 4}$$

14. $f(x)$ = time in minutes doing Homework

x = # of homework problems

$$f(8) = 32$$

$\boxed{\text{it takes 32 minutes to complete 8 homework problems}}$

$$15. \text{ y-int: } (0, 3) \quad m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - (-1)}{0 - (-1)} = \frac{4}{1} = 4$$

$$y = 4x + 3$$

$$-4x \quad -4x$$

$$-4x + y = 3$$

$$\boxed{4x - y = -3}$$

Standard form: ① x and y same side

② A value is positive

③ Whole #s only