Name _____ Date _____

Write the equation of the line in Slope-Intercept Form.

9) through: $(1, 2)$, slope $= 7$

$2 = 7(1) + b$

$-5 = b$

$y = 7x - 5$

10) through: $(3, -1)$, slope $= -1$

$-1 = -1 \cdot 3 + b$

$-1 = -3 + b$

$2 = b$

$y = -x + 2$

11) through: $(-2, 5)$, slope $= -4$

$5 = -4 \cdot -2 + b$

$5 = 8 + b$

$-3 = b$

$y = -4x - 3$

12) through: $(3, 5)$, slope $= \frac{5}{3}$

$5 = \frac{5}{3} \cdot 3 + b$

$5 = 5 + b$

$0 = b$

$y = \frac{5}{3}x$

13) through: $(2, -4)$, slope $= -1$

$y = -1 \cdot 2 + b$

$-y = -2 + b$

$-2 = b$

$y = -x - 2$

14) through: $(2, 5)$, slope $=$ undefined Vert Line

$x = 2$

15) through: $(3, 1)$, slope $= \frac{1}{2}$

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

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

$-\frac{1}{2} = b$

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

16) through: $(-1, 2)$, slope $= 2$

$2 = 2 \cdot -1 + b$

$2 = -2 + b$

$4 = b$

$y = 2x + 4$

Write the equation of the line in Slope-Intercept Form.

17) through: $(4, 2)$, parallel to $y = -\frac{3}{4}x - 5$

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

$2 = -3 + b$

$5 = b$

$y = -\frac{3}{4}x + 5$

18) through: $(-3, -3)$, parallel to $y = \frac{7}{3}x + 3$

$-3 = \frac{7}{3}(-3) + b$

$-3 = -7 + b$

$4 = b$

$y = \frac{7}{3}x + 4$

19) through: $(-4, 0)$, parallel to $y = \frac{3}{4}x - 2$

$0 = \frac{3}{4}(-4) + b$

$0 = -3 + b$

$3 = b$

$y = \frac{3}{4}x + 3$

20) through: $(-1, 4)$, parallel to $y = -5x + 2$

$y = -5(-1) + b$

$y = 5 + b$

$-1 = b$

$y = -5x - 1$

21) through (2,0), perpendicular to

$y = \frac{1}{3}x + 3$

$m_\perp = -3$

$0 = -3(2) + b$

$6 = b$

$y = -3x + 6$

22) through (4,-4), perpendicular to

$y = -x - 4$

$m_\perp = 1$

$-4 = 1 \cdot 4 + b$

$-8 = b$

$y = x - 8$

23) through (-2,4), perpendicular to

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

$m_\perp = \frac{2}{5}$

$4 = \frac{2}{5}(-2) + b$

$4 = -\frac{4}{5} + b$

$\frac{24}{5} = b$

$y = \frac{2}{5}x + \frac{24}{5}$

24) through (-4,-1).perpendicular to

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

$m_\perp = 2$

$-1 = 2 \cdot -4 + b$

$-1 = -8 + b$

$7 = b$

$y = 2x + 7$