

HW 38

P179 #3, 4, 24,
79-85, 87-89, 91-93

3. parallel

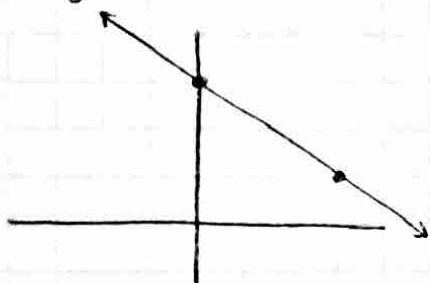
$$84. L_1: \frac{5 - -1}{1 - -2} = \frac{6}{3} = 2$$

4. perpendicular

$$L_2: \frac{-5 - 3}{5 - 1} = \frac{-8}{4} = -2$$

neither

$$24. \begin{aligned} 3y &= -2x + 9 \\ y &= -2/3x + 3 \end{aligned}$$



$$85. L_1: \frac{0 - 6}{-6 - 3} = \frac{-6}{-9} = \frac{2}{3}$$

$$L_2: \frac{7/3 - -1}{5 - 0} = \frac{10/3}{5} = \frac{2}{3}$$

parallel

79. parallel same slope

$$87. \begin{aligned} -2y &= -4x + 3 \\ y &= 2x - 3/2 \end{aligned}$$

80. parallel same slope

$$\begin{aligned} a) \quad y &= 2x + b \\ 1 &= 2(2) + b & y &= 2x - 3 \\ -3 &= b \end{aligned}$$

81. neither

82. perpendicular

$$83. L_1: \frac{9 - -1}{5 - 0} = \frac{10}{5} = 2$$

$$\begin{aligned} b) \quad y &= -1/2 x + b \\ 1 &= -1/2(2) + b & y &= -1/2 x + 2 \\ 1 &= -1 + b \\ 2 &= b \end{aligned}$$

$$L_2: \frac{1 - 3}{4 - 0} = \frac{-2}{4} = -1/2$$

perpendicular

$$88. y = -x + 7$$

$$\begin{aligned} a) \quad 2 &= -1(-3) + b & y &= -x - 1 \\ 2 &= 3 + b \\ -1 &= b \end{aligned}$$

$$\begin{aligned} b) \quad 2 &= 1(-3) + b & y &= -x + 5 \\ 5 &= b \end{aligned}$$

$$89. \quad 4y = -3x + 7$$

$$y = \left(\frac{-3}{4}\right)x + \frac{7}{4}$$

$$a) \quad \frac{7}{8} = -\frac{3}{4}\left(-\frac{2}{3}\right) + b$$

$$\frac{7}{8} = \frac{6}{12} + b$$

$$\frac{3}{8} = b$$

$$\boxed{y = -\frac{3}{4}x + \frac{3}{8}}$$

$$b) \quad \frac{7}{8} = \frac{4}{3}\left(-\frac{2}{3}\right) + b$$

$$\frac{7}{8} = -\frac{8}{9} + b$$

$$\frac{127}{72} = b$$

$$\boxed{y = \frac{4}{3}x + \frac{127}{72}}$$

$$91. \quad y = -3$$

$$a) \quad y = 0$$

$$b) \quad x = -1$$

$$92. \quad y = 2$$

$$a) \quad y = 1$$

$$b) \quad x = -4$$

$$93. \quad x = 4$$

$$a) \quad x = 3$$

$$b) \quad y = -2$$