

The deadline for all homework assignments is the one specified in Archie before 11:59 pm. As discussed in class, It must be correctly uploaded in order to be graded. Show all your work and justifications.

For Exercises 43–50, write an equation of the line satisfying the given conditions. Write the answer in slope-intercept form (if possible) and in standard form with no fractional coefficients.

43. Passes through (2, 5) and is parallel to the line defined by  $2x + y = 6$ .  $y = -2x + 9$ ;  $2x + y = 9$

45. Passes through (6, -4) and is perpendicular to the line defined by  $x - 5y = 1$ .  $y = -5x + 26$ ;  $5x + y = 26$

47. Passes through (6, 8) and is parallel to the line defined by  $3x = 7y + 5$ .  $y = \frac{3}{7}x + \frac{38}{7}$ ;  $3x - 7y = -38$

49. Passes through (2.2, 6.4) and is perpendicular to the line defined by  $2x = 4 - y$ .  
 $y = 0.5x + 5.3$ ;  $5x - 10y = -53$

44. Passes through (3, -1) and is parallel to the line defined by  $-3x + y = 4$ .  $y = 3x - 10$ ;  $3x - y = 10$

46. Passes through (5, 4) and is perpendicular to the line defined by  $x - 2y = 7$ .  $y = -2x + 14$ ;  $2x + y = 14$

48. Passes through (7, -6) and is parallel to the line defined by  $2x = 5y - 4$ .  $y = \frac{2}{5}x - \frac{44}{5}$ ;  $2x - 5y = 44$

50. Passes through (3.6, 1.2) and is perpendicular to the line defined by  $4x = 9 - y$ .  
 $y = 0.25x + 0.3$ ;  $5x - 20y = -6$