Homework: Parallel and Perpendicular Lines

In Problems 1-4, determine whether the given linear equations are parallel, perpendicular, or neither

1. $y = 7x - 2$ $-7x + y = 3$	2. $3x + 5y = 2$ $-x - 3y = 1$
3. $6y = 2x - 12$ $y + 3x = 1$	4. $5y = x - 10$ $20y - 4x = 80$

In Problems 5-14, find an equation of the line with the given properties. Express your answer in slope-intercept form

5. Parallel to $y = \frac{1}{5}x$ through the point (0, 4)	6. Perpendicular to $y = -3x + 2$ through the point (0, 3)
7. Perpendicular to $x = 5$ through the point (-2,0)	8. Parallel to $y = 3x - 1$ through the point (5, 2)
9. Perpendicular to $y = -5x + 2$ through the point (3, -1)	10. Parallel to $y = 3$ through the point (4, 5)
11. Perpendicular to $x = -4$ through the point (8, 1)	12. Parallel to $5x - y = -4$ through the point (-2, -3)
13. Parallel to $7x - 2y = 3$ through the point (6,1)	14. Perpendicular to $8x + 3y = 4$ through the point (5,-2)