Parallel Lines and Perpendicular Lines

Parallel Lines:

coplanar lines that do not intersect
have the same slope

Perpendicular Lines:

intersecting lines that form 90°
the slopes are negative reciprocals of each other

Practice Exercises

Determine whether the following lines are parallel or perpendicular.

1. $x - 2y = 6; 2x + y = 5$
2. $2x - y = 6; 4x = 2y - 6$
3. $3x - y = -2; 3y + 2 = -x$
4. $6x - 2y = 12; 3x - y = -29$
5. $3x + 5y = 4; 5x - 3y = 19$

Problem Set

Determine whether the following lines are parallel or perpendicular.

1. $2x - 3y = 6; 3x + 2y = 5$
2. $2y - x = 6; x = 2y + 6$
3. $-4x + 8y = 2; -6x + 1 = 3y$
4. $2x + 3y = 12; 6y = -4x + 8$
5. $3x + 4y = 4; 4x - 3y = 9$

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