properties of linear systems

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| Graphically solve the following three systems of linear equations. Include a sketch of each system along with window settings. |



* How many solutions does each system have?

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| In any system of linear equations there are 3 possible types of solutions.   1. **INTERSECTING LINES** **(one solution)**     \*different slopes   1. **PARALLEL LINES (no solutions)**     \*same slopes with different  y-intercepts   1. **COINCIDENT LINES** **(infinite solutions)**     \*same slopes and same  y-intercepts |

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| Without graphing, determine the *number* of solutions for each linear system below. |



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| Given the equation  write another linear equation that will form a linear system with: |

1. Exactly one solution.
2. No solution.
3. Infinite solutions.