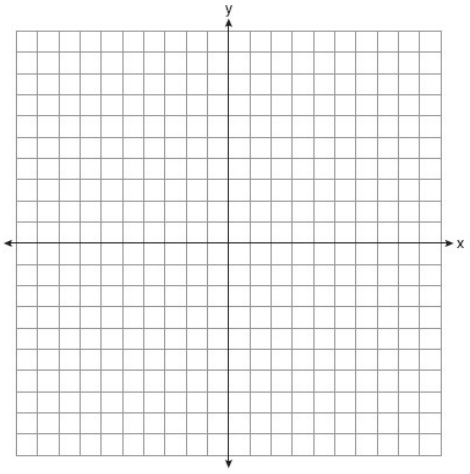
Name _____ Date _____
Mr. Schlansky Geometry

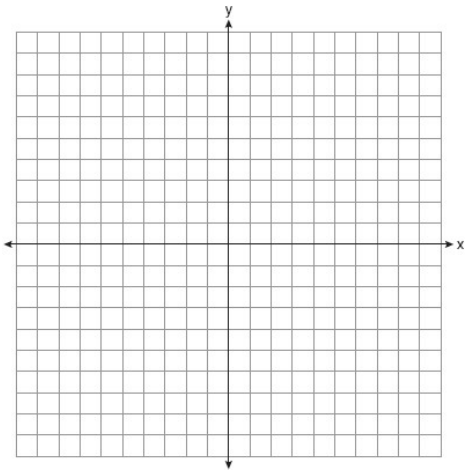
# *Line Dilations Centered at a Point*

**If the point is on the line, the equation does not change**
**If the point is not on the line, use a graph**

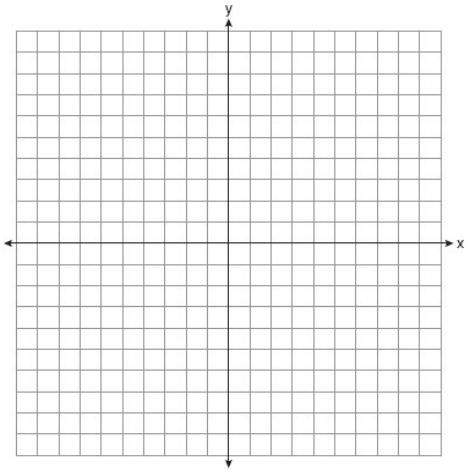
1. Dilate $y = 2x - 1$ by a scale factor of 2 centered at $(2, 3)$



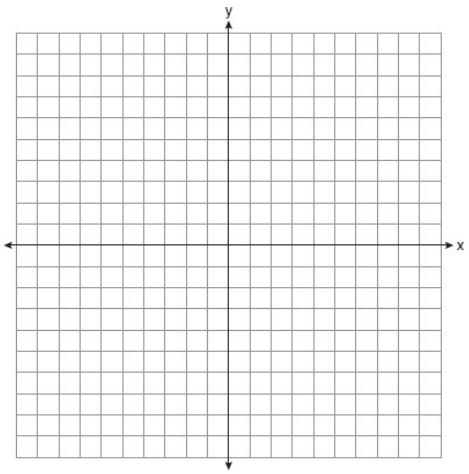

2. Dilate $y = 2x - 1$ by a scale factor of 2 centered at $(2, 2)$



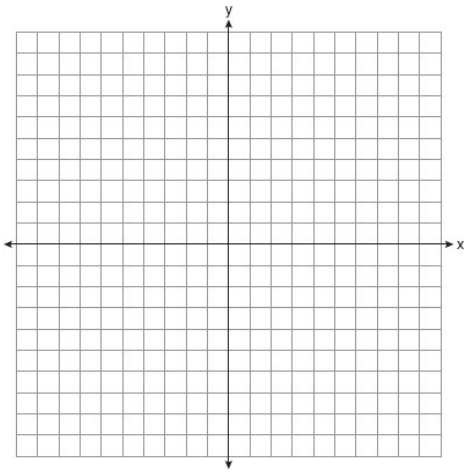

3. Dilate $y = \frac{1}{2}x + 4$ by a scale factor of 3 centered at $(1, 6)$



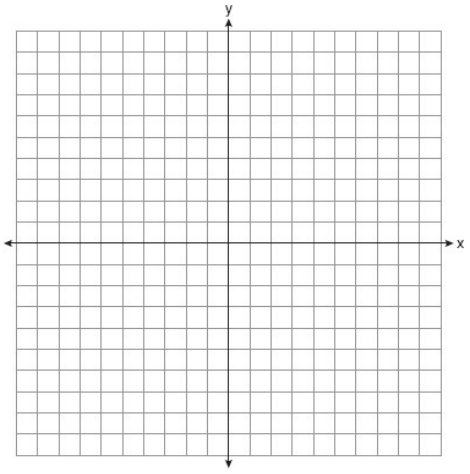
4. Dilate $y = 3x - 2$ by a scale factor of 4 centered at $(-1, -5)$



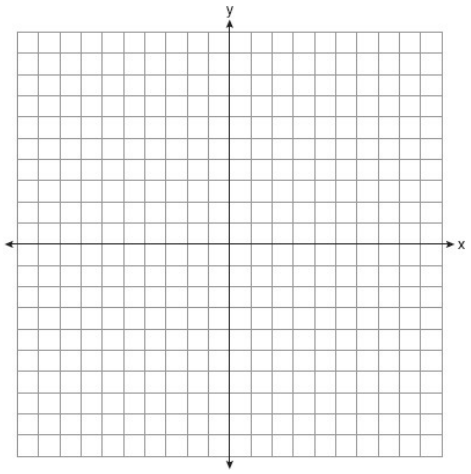

5. Dilate $y + x = 3$ by a scale factor of 2 centered at $(-1, 6)$



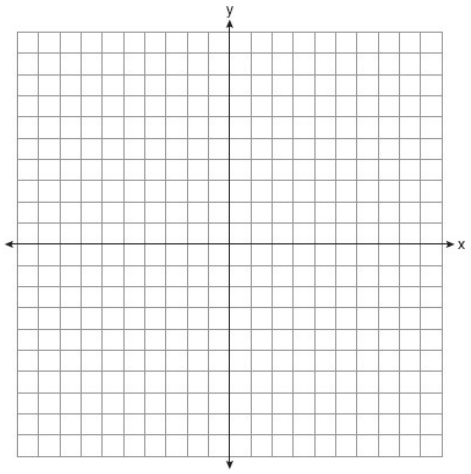

6. Dilate $y + 3x = 4$ by a scale factor of $\frac{1}{2}$ centered at $(0, 6)$



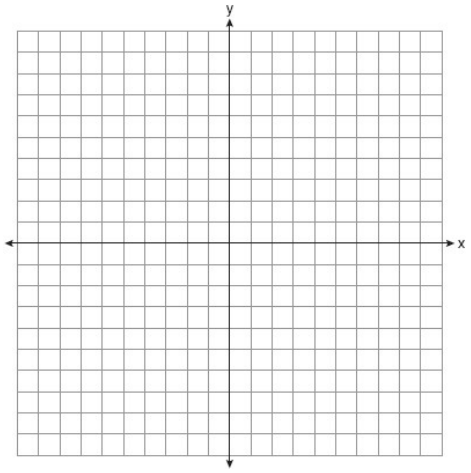
7. Dilate $2y = 4x + 2$ by a scale factor of $4$ centered at $(-1, 4)$



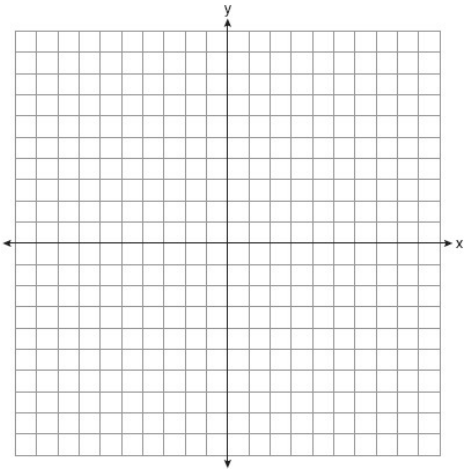

8. Dilate $y + 3x = -2$ by a scale factor of 3 centered at $(2, -8)$



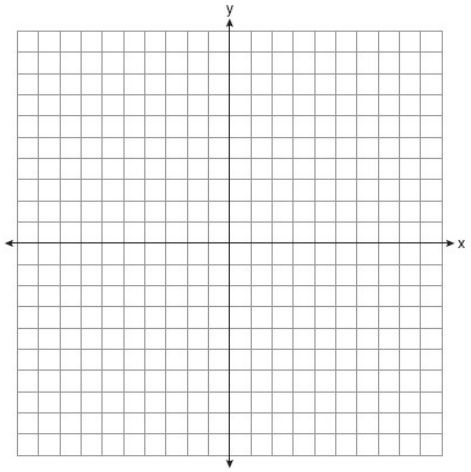

9. Dilate $2y = 5x + 4$ by a scale factor of 2 centered at $(1, -1)$



10. Dilate $2x+3y=-2$ by a scale factor of $\frac{1}{4}$ centered at $(2,-2)$




11. Dilate $2y=3x+4$ by a scale factor of 2 centered at $(2,5)$




12. Dilate $2y+6x=4$ by a scale factor of 3 centered at $(-7,3)$