## Systems of Equations Picture

Solve each of the systems of equations. Graph the solutions and connect them to make a picture. \#1-8 make the first part. \#9-17 make the second part.

1. $\left\{\begin{array}{c}2 x+y=-12 \\ y=x-3\end{array}\right.$
2. $\left\{\begin{array}{c}y=\sqrt{x+2} \\ x+3 y=-2\end{array}\right.$
3. $\left\{\begin{array}{c}y=x^{2}+2 x+4 \\ x-y=-4\end{array}\right.$
4. $\left\{\begin{array}{c}y=\frac{3}{x}, x>0 \\ y=2 x+1\end{array}\right.$
5. $\left\{\begin{array}{c}3 x-y=6 \\ -2 x+5 y=-4\end{array}\right.$
6. $\left\{\begin{array}{l}\frac{x^{2}}{9}+(y+5)^{2}=1 \\ y=\sqrt{x-3}-5\end{array}\right.$
7. $\left\{\begin{array}{c}x+y=-1 \\ x-y=3\end{array}\right.$
8. $\left\{\begin{array}{c}3 x+2 y=-9 \\ -2 x+4 y=-10\end{array}\right.$

Finish this section by connecting back to \#1.
Start a new section
9. $\left\{\begin{array}{c}17 x+y=3 \\ -15 x-2 y=-6\end{array}\right.$

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10. $\left\{\begin{array}{c}y=\frac{9}{8} x^{2}-\frac{9}{4} x+\frac{13}{8} \\ y=-\frac{3}{4} x+\frac{5}{4}\end{array}\right.$
11. $\left\{\begin{array}{c}9 x+11 y=6 \\ 3 x-5 y=2\end{array}\right.$
12. $\left\{\begin{array}{c}3 x-y=4 \\ x+5 y=-4\end{array}\right.$
13. $\left\{\begin{array}{l}4 x+6 y=-3 \\ -4 x-2 y=1\end{array}\right.$
14. $\left\{\begin{array}{l}x+y=-2 \\ x-6 y=5\end{array}\right.$
15. $\left\{\begin{array}{c}12 x-19 y=-8 \\ 6 x+y=-4\end{array}\right.$
16. $\left\{\begin{array}{c}x+2 y-z=0 \\ -x-3 y+2 z=-0.5 \\ -x+y+2 z=1.5\end{array}\right.$
17. $\left\{\begin{array}{r}3 x+y+6 z=0 \\ 2 y-z=2 \\ z=0\end{array}\right.$

Finish this section by connecting back to \#9

