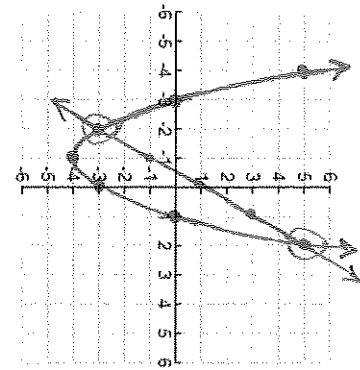
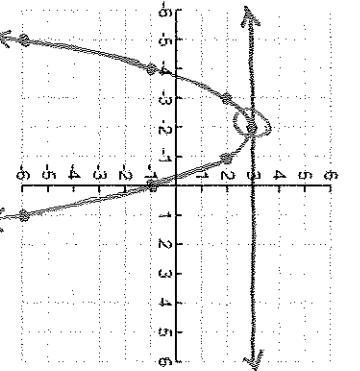
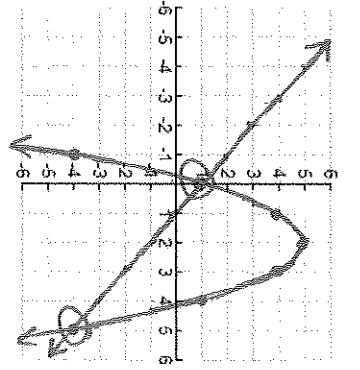
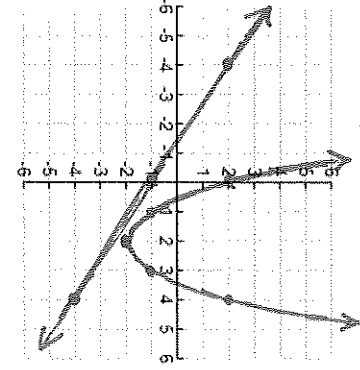


I. Solve each linear and quadratic system BY GRAPHING. State the solution(s) on the line. Must be ACCURATE!

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|---|---|--|--|
| <p>1.) <math>\begin{cases} y = x^2 + 2x - 3 \\ y = 2x + 1 \end{cases}</math></p>  <p>Solution(s): <math>(-2, -3)</math> <math>(2, 5)</math></p> | <p>2.) <math>\begin{cases} y = -x^2 - 6x - 6 \\ y = 3 \end{cases}</math></p>  <p>Solution(s): <math>(-2, 3)</math></p> | <p>3.) <math>\begin{cases} y = -(x-2)^2 + 5 \\ y = -x + 1 \end{cases}</math></p>  <p>Solution(s): <math>(0, 1)</math> <math>(5, -4)</math></p> | <p>4.) <math>\begin{cases} y = x^2 - 4x + 2 \\ y = -\frac{3}{4}x - 1 \end{cases}</math></p>  <p>Solution(s): NO SOLUTION</p> |
|---|---|--|--|

II. Solve each linear and quadratic system BY SUBSTITUTION. State the solution(s) on the line. Must SHOW WORK!

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| <p>5.) <math>\begin{cases} y = x^2 + 5x - 2 \\ y = 3x - 2 \end{cases} \rightarrow</math> Solution(s): <math>(-2, -8)</math><br/><math>(0, -2)</math></p> <p><math>3x - 2 = x^2 + 5x - 2</math><br/><math>0 = x^2 + 2x</math><br/><math>x = 0 \quad x = -2</math></p>   | <p>6.) <math>\begin{cases} y = -x^2 - 3x + 2 \\ y = x + 6 \end{cases} \rightarrow</math> Solution(s): <math>(-2, 4)</math></p> <p><math>x + 6 = -x^2 - 3x + 2</math><br/><math>0 = -x^2 - 4x - 4</math><br/><math>0 = -(x^2 + 4x + 4)</math><br/><math>x = -2</math></p>   | <p>7.) <math>\begin{cases} y = -2x^2 - 4x - 1 \\ y = 2x + 4 \end{cases} \rightarrow</math> Solution(s): NO SOLUTION</p> <p><math>2x + 4 = -2x^2 - 4x - 1</math><br/><math>0 = -2x^2 - 6x - 5</math><br/><math>x = \frac{-3 \pm i}{2}</math></p>  |
| <p>8.) <math>\begin{cases} x + y = 5 \\ y + 1 = 3x^2 + 2x \end{cases} \rightarrow</math> Solution(s): <math>(1, 4)</math><br/><math>(-2, 7)</math></p> <p><math>5 - x = 3x^2 + 2x - 1</math><br/><math>0 = 3x^2 + 3x - 6</math><br/><math>0 = 3(x^2 + x - 2)</math><br/><math>3(x+2)(x-1) \rightarrow x = -2</math><br/><math>x = 1</math></p> | <p>9.) <math>\begin{cases} x^2 + y - 8 = 0 \\ x + y - 2 = 0 \end{cases} \rightarrow</math> Solution(s): <math>(3, -1)</math><br/><math>(-2, 4)</math></p> <p><math>-x^2 + 8 = -x + 2</math><br/><math>-x^2 + x + 6 = 0</math><br/><math>-(x^2 - x - 6) = 0</math><br/><math>-(x-3)(x+2) = 0 \rightarrow x = 3</math><br/><math>x = -2</math></p> | <p>10.) <math>\begin{cases} 5x + y = 2x^2 + 6 \\ y + 4x = 7x - 2 \end{cases} \rightarrow</math> Solution(s): <math>(2, 4)</math></p> <p><math>2x^2 - 5x + 6 = 3x - 2</math><br/><math>2x^2 - 8x + 8 = 0</math><br/><math>2(x^2 - 4x + 4) = 0</math><br/><math>2(x-2)(x-2) = 0 \rightarrow x = 2</math></p> |