

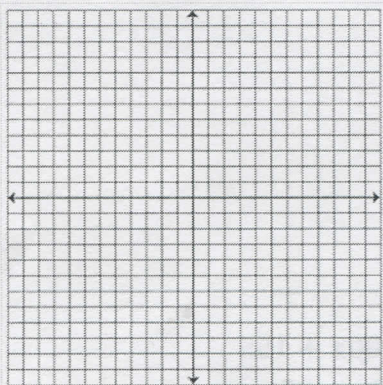
3.5 Solving Non-Linear Systems CYU

Use when you get it right all by yourself
S Use when you did it all by yourself, but made a silly mistake
H Use when you could do it alone with a little help from teacher or peer
G Use when you completed the problem in a group
X Use when a question was attempted but wrong (get help)
N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Solving Systems by graphing	1, 2	3	
Solving Systems by substitution	4, 5, 6		7
Solving Systems by elimination	8, 9	10	11

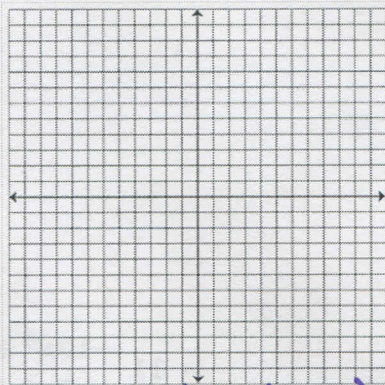
Solve the system by graphing. Remember you can check your answer by plugging them back into the original equations.

1. $y = \frac{1}{3}x + 2$
 $y = -3x^2 - 5x - 4$



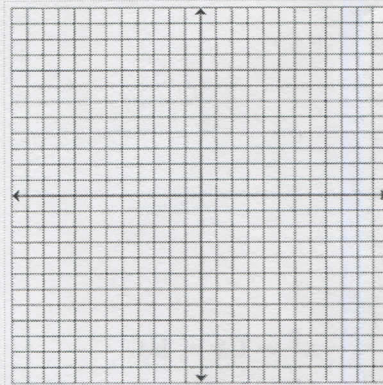
no solution

2. $y = -3x - 17$
 $y = -3x^2 - 30x - 71$



$(-3, -8)$ & $(-6, 1)$

3. $y = \frac{1}{2}(x+2)^2$
 $y = -\frac{1}{2}x^2 + 2$



$(-2, 0)$ & $(0, 2)$

Solve the system by substitution. Remember you can check your answer by plugging them back into the original equations.

4. $y = x + 5$
 $y = x^2 - x + 2$

$(3, 8)$ & $(-1, 4)$

5. $y = -8$
 $x^2 + y^2 = 64$

$(0, -8)$

$$6. \begin{aligned} x &= 3 \\ -3x^2 + 4x - y &= 8 \end{aligned}$$

$(3, -23)$

$$7. \begin{aligned} y + 16x - 22 &= 4x^2 \\ 4x^2 - 24x + 26 + y &= 0 \end{aligned}$$

$(2, 6) \neq (3, 10)$

Solve the system by substitution. Remember you can check your answer by plugging them back into the original equations.

$$8. \begin{aligned} -x + 2 &= -y \\ -3x^2 + 2x - 5 &= y \end{aligned}$$

no solution

$$9. \begin{aligned} -3x^2 + y &= -18x + 29 \\ -3x^2 - y &= 18x - 25 \end{aligned}$$

no solution

$$10. \begin{aligned} y &= -x^2 - 6x - 10 \\ 3x^2 + 18x + 22 &= y \end{aligned}$$

$(-5, 0) \neq (0, 22)$
 $\approx (-4.65, -4.71) \neq$
 $\approx (0.65, -15.29)$

$$11. \begin{aligned} -10x^2 + y &= -80x + 155 \\ 5x^2 + y &= 40x - 85 \end{aligned}$$

$(1, 4) \neq (8, -15)$
 $(4, -5)$ *no solution on*

CYU Reflection: How far can you go: basic, intermediate, or advanced?

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the

