U3D3

Solving Systems Graphically

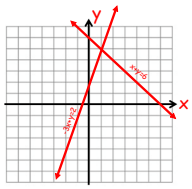
Aug 13-9:09 AM

Warm-Up:

Graph: $x + y = 6$
$-3x + y = 2$

$y = -x + 6$ $y = 3x + 2$
$m = -1$ $m = 3$
$b = 6$ $b = 2$

(1, 5)



Solve the above system algebraically.

$3x + 3y = 18$
$-3x + y = 2$
$4y = 20$
$y = 5$

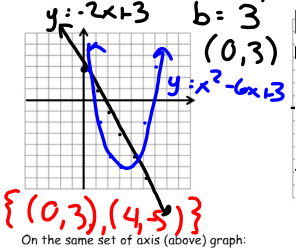
$x + 5 = 6$
$x = 1$

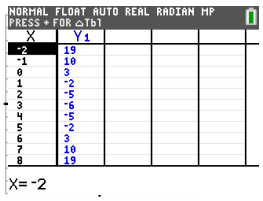
Aug 13-10:47 AM

1. $x^2 + y^2 = 25$

Do question 1 from Day 5
$y = -2x + 3$
$y = x^2 - 6x + 3$

$m = \frac{-2}{1}$
$b = 3$
$(0,3)$
$y = -2x + 3$
$y = x^2 - 6x + 3$





$\{(0,3),(4,-5)\}$

On the same set of axis (above) graph:

1. $4x + 3y = 0$
2. $x - y = 3$

Where do they intersect?

Oct 5-9:41 AM

Review Completing the Square. Set up. Do not solve.

$x^2 + 4x = 6$

$x^2 + 4x + 4 = 6 + 4$
$\div 2 \left(\frac{4}{2}\right)^2$
$(x+2)^2 = 10$

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Rewrite the equation of the circle by completing the square in both x and y. Describe and graph the circle represented by the equation.

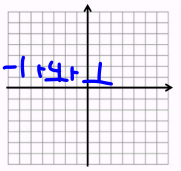
$(x-h)^2 + (y-k)^2 = r^2$

3. $x^2 + y^2 - 4x + 2y + 1 = 0$

① $x^2 - 4x + 4 + y^2 + 2y + 1 = -1 + 4 + 1$
$\left(\frac{-4}{2}\right)^2$ $\left(\frac{2}{2}\right)^2$

② $(x-2)^2 + (y+1)^2 = 4$

$C: (2,-1)$
$r = 2$



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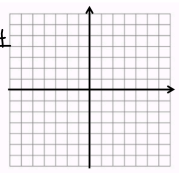
4. $x^2 + y^2 - 6x + 4y - 3 = 0$

① $x^2 - 6x + 9 + y^2 + 4y + 4 = 3 + 9 + 4$
$\left(\frac{-6}{2}\right)^2$ $\left(\frac{4}{2}\right)^2$

② $(x-3)^2 + (y+2)^2 = 16$

③ $C(3,-2)$
$r = 4$



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