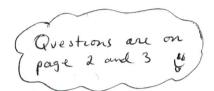
Honors Advanced Algebra Target 7A: Walk Around



DATE:

Directions: Complete each problem and show your work. Check your answers.

15x +20y =0 Algebraically, we have: $-\frac{3}{4}x = |x+3| \implies -\frac{3}{4}x = x+3 \text{ or}$ x-12

| (y=x2 -OR-algebraically =-1±V12-4(1X-5 | $-3x = 4x + 32$ $-\frac{3}{4}x = -x -$ |
|---|---|
| Graph to How do you = $-1\pm\sqrt{2}i$ $x=-1\pm\sqrt{2}i$ $x=-1\pm\sqrt{2}i$ $x=-1\pm\sqrt{2}i$ $x=-1\pm\sqrt{2}i$ | Howdo -7x = 12 -3x = -4x |
| $\begin{cases} y = \log_{10} X \rightarrow common \log \\ y = 3x \end{cases}$ | $\begin{cases} y = 17x + 1 & y = 17x + 1 \\ y = -24x + 68 & = 17(6741) + 1 \end{cases}$ |
| No intersection since y = 3x goes through origin and y = log x doesn't. You can see this visually by graphing No solution | $ \frac{17x+y=-24x+68}{24x-(-+24x-1)} = \frac{1139}{41} + 1 $ $ \frac{24x-(-+24x-1)}{41} = \frac{1139}{41} + \frac{41}{41} $ $ x = 67/41 = \frac{1180}{41} \cdot \frac{118}{41} $ |
| (you com y = -x +8 (you com graph it, too) | $\begin{cases} y = -x + 2 \\ y = x + 2 \end{cases}$ |
| Twovid tell him -x+8=-zx+16 +bat mathematically to the system is (8,0) x=8 Twovid tell him that mathematically speaking the solution to the system is (8,0) and the meaning of it | -x+2=x+2 $+x=+x$ $= +x$ $= -x$ (You can graph it, too) |
| depends on context. | 0 = 2x ⇒ x=0 |
| ⊅! | D! |
| | |
| ① | (io) |
| B! | |

| 1. | At which point do the two equations $3x + 5 = y + 4x$ and $y = x^2$ intersect? | |
|----|---|------------------|
| 2. | At which point do the equations $y = x + 3 $ and $15x + 20y = 0$ intersect? | |
| 3. | Find the intersection point of $y = \log x$ and $y = 3x$. | |
| 4. | Find the intersection of the two equations $y = 17x + 1$ and $y = -24x + 68$. | |
| 5. | Imagine you're interviewing for a position with Shmoop (your dream job, obvious you don't want to screw it up. Dave, the interviewer, asks you to find the intersection the equations $y = -x + 8$ and $y = -2x + 16$. What do you tell him? | ly) and on of |
| 6. | Which of the following points is on both line $y = -x + 2$ and line $y = x + 2$? (A) (0, 0) | |
| | (B)(0,1) | |
| | (C)(0,-1) | |
| | (D) $(0, 2)$ | |
| 7. | When estimating the intersection of two lines on a graph, you can get a precise ans this statement true or false? | wer. Is |
| | (A) True, since graphs are always exactly correct when it looks as if the line is specifically at one point | |
| | (B) False, because one can never be completely sure if the graph is correct since it depends highly on the sensitivity of the graph | |
| | (C) False, since graphs offer limited visibility and it's usually impossible to see the function | entire |
| | (D) Both (B) and (C) | |
| | | |

- 8. Your classmate needs to find the points of intersection of two very simple equations. She makes a table that lists 5 or so integers and finds a point of intersection. She thinks she's done and goes to play outside. What do you think of this?
 - (A) She's definitely done. She should go have fun!
 - (B) A table of values may not show the full story because there may be points of intersection missed, but they're easy equations so she's probably done.
 - (C) She isn't finished until she's graphed the two functions and visually seen their intersection point.
 - (D) There's no way she's finished. She has to calculate it mathematically only.
- 9. When you find a point on a graph that you think is the intersection, the best way to double check your answer is to:
 - (A) Plug in the x value to see if one of the y values of one of the equations matches the one you approximated from the graph
 - (B) Plug in the x value to see if both of the y values of both of the equations match the one you approximated from the graph
 - (C) Plug in the y values to see if one of the x values of one of the equations matches the one you approximated from the graph
 - (D) None of the above
- 10. The most accurate way of finding the points of intersection of a system of equations is via:
 - (A) A table of values
 - (B) A graph
 - (C) Using algebra to solve for the variables
 - (D) None of the above