

TH-AZ Algebra 2 Week 16

$$\begin{aligned} \textcircled{1} & \left\{ \begin{aligned} 2x - y + 2z &= 10 \\ 4x + 2y - 5z &= 10 \end{aligned} \right\} \\ \textcircled{2} & \\ \textcircled{3} & x - 3y + 5z = 8 \end{aligned}$$

$$\begin{aligned} -2(2x - y + 2z &= 10) \textcircled{1} \\ 4x + 2y - 5z &= 10 \textcircled{2} \end{aligned}$$

$$\begin{array}{r} \cancel{-4x} + 2y - 4z = -20 \\ + \cancel{4x} + 2y - 5z = 10 \\ \hline 4y - 9z = -10 \end{array}$$

$$\begin{aligned} \textcircled{1} & 2x - y + 2z = 10 \\ \textcircled{3} & -2(x - 3y + 5z = 8) \end{aligned}$$

$$\begin{aligned} -5(4y - 9z &= -10) \\ 4(5y - 8z &= -6) \end{aligned}$$

$$\begin{array}{r} \cancel{2x} - y + 2z = 10 \\ + \cancel{-2x} + 6y - 10z = -16 \\ \hline 5y - 8z = -6 \end{array}$$

$$\begin{array}{r} \cancel{-20y} + 45z = 50 \\ \cancel{20y} - 32z = -24 \\ \hline 13z = 26 \\ \frac{13z}{13} = \frac{26}{13} \end{array}$$

$$4y - 9z = -10$$

$$4y - 9(2) = -10$$

$$4y - 18 = -10$$

$$\frac{4y}{4} = \frac{8}{4}$$

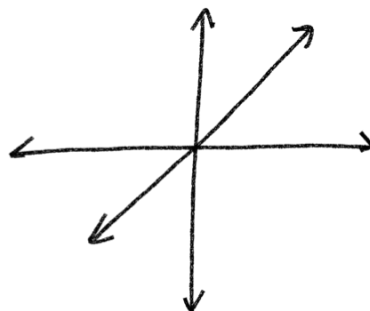
$$y = 2$$

$$\begin{aligned} x - 3y + 5z &= 8 \\ x - 3(2) + 5(2) &= 8 \\ x - 6 + 10 &= 8 \\ x + 4 &= 8 \\ \cancel{-4} \quad \cancel{-4} & \end{aligned}$$

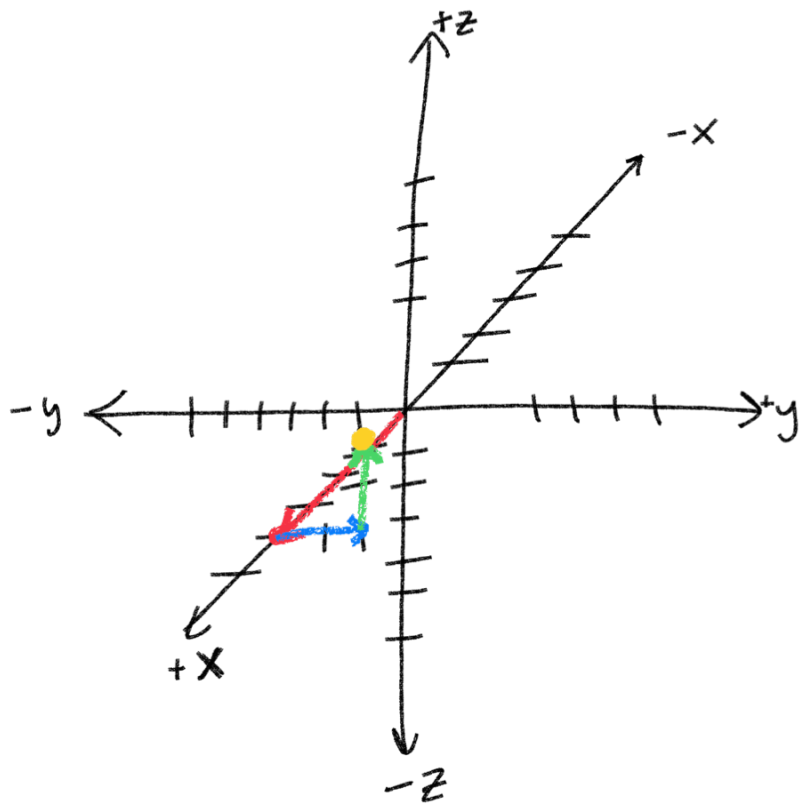
$$x = 4$$

(x, y, z)

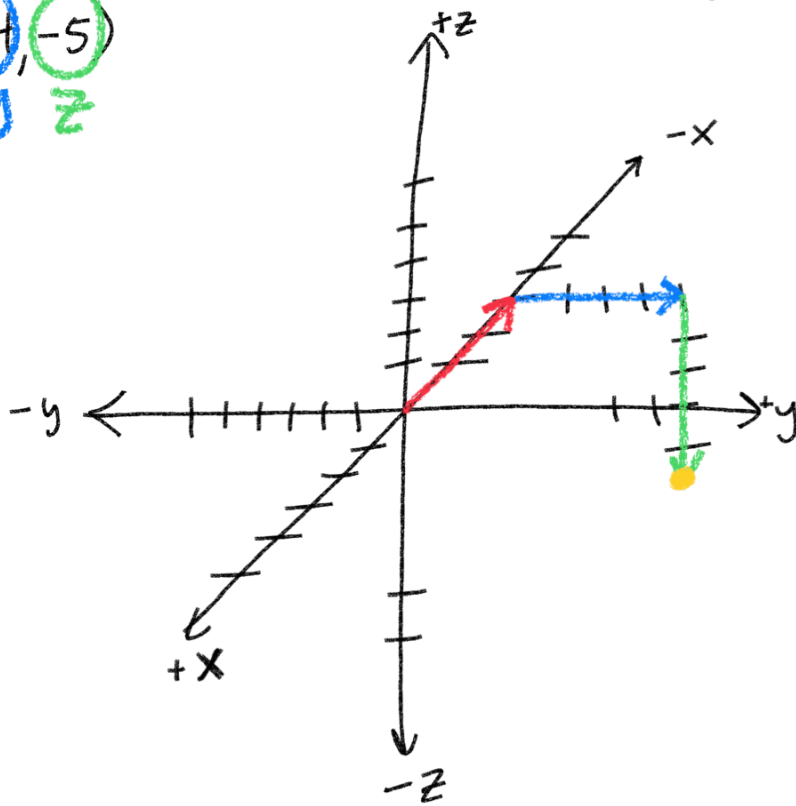
(4, 2, 2)



(4, 2, 2)  
x y z



(-3, 4, -5)  
x y z



$$\begin{cases} \textcircled{1} & x - y + z = \textcircled{6} \\ \textcircled{2} & 2x + 3y + 2z = \textcircled{2} \\ \textcircled{3} & 3x + 5y + 4z = \textcircled{4} \end{cases}$$

Solve and graph.

$$\begin{cases} \textcircled{1} & 3(x - y + z = 6) \\ \textcircled{2} & 2x + 3y + 2z = 2 \end{cases}$$

$$\begin{cases} \textcircled{1} & 5(x - y + z = 6) \\ \textcircled{3} & 3x + 5y + 4z = 4 \end{cases}$$

$$\begin{array}{r} 3x - 3y + 3z = 18 \\ + 2x + 3y + 2z = 2 \\ \hline 5x + 5z = 20 \end{array}$$

$$\begin{array}{r} 5x - 5y + 5z = 30 \\ + 3x + 5y + 4z = 4 \\ \hline 8x + 9z = 34 \end{array}$$

$$\begin{array}{r} 9(5x + 5z = 20) \\ -5(8x + 9z = 34) \\ \hline \end{array}$$

$$\begin{array}{r} 45x + 45z = 180 \\ -40x - 45z = -170 \\ \hline 5x = 10 \end{array}$$

Note

$$\frac{5x}{5} + \frac{5z}{5} = \frac{20}{5}$$

$$x + z = 4$$

$$\frac{5x}{5} = \frac{10}{5} \quad \boxed{x = 2}$$

$$x - y + z = 6$$

$$2 - y + 2 = 6$$

$$4 - y = 6$$

$$-y = 2$$

$$\frac{-y}{-1} = \frac{2}{-1} \quad \boxed{y = -2}$$

$$5x + 5z = 20$$

$$5(2) + 5z = 20$$

$$10 + 5z = 20$$

$$\frac{5z}{5} = \frac{10}{5}$$

$$\boxed{z = 2}$$

$$(x, y, z)$$

$$\boxed{(2, -2, 2)}$$

$$x - y + z = 6$$

$$2x + 3y + 2z = 2$$

$$3x + 5y + 4z = 4$$

$$-2(x - y + z = 6)$$

$$2x + 3y + 2z = 2$$

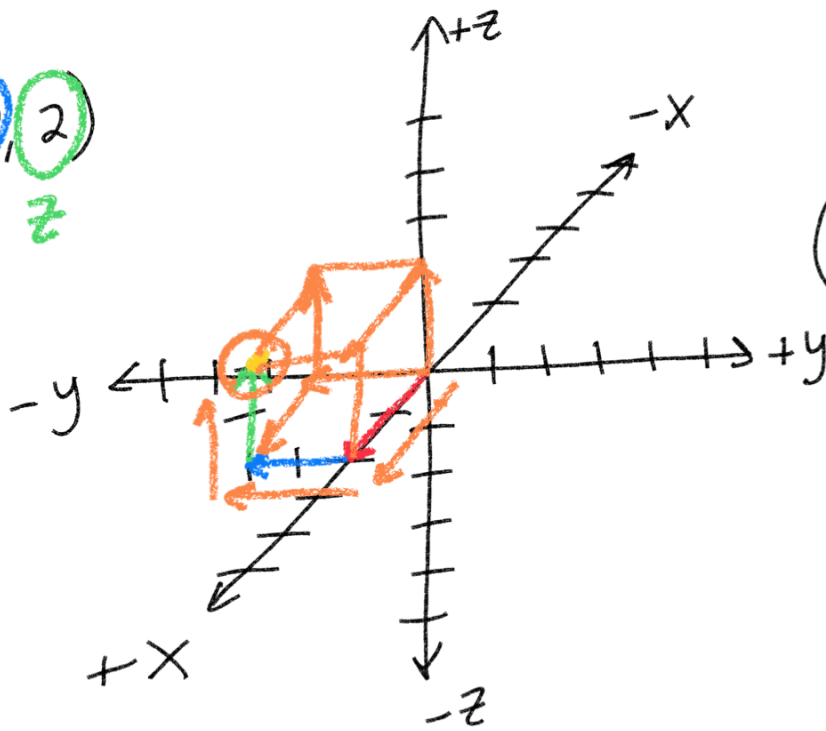
$$-2x + 2y - 2z = -12$$

$$2x + 3y + 2z = 2$$

$$\frac{5y}{5} = \frac{-10}{5}$$

$$\boxed{y = -2}$$

(2, -2, 2)  
x y z



12.5 pts on test

10 pts for problem

2.5 pt graph

[3, 2, -5]

HW  
Ch 3.5 ; 3.6 evens  
\* Supplemental WS  
Online HW 16 } Jan 28<sup>th</sup>  
Quiz 16 }  
Pre-Test  
HW/quiz 15 due Jan 21<sup>st</sup>