

1.1

Friday, March 19, 2021

5:49 PM

1a  $(3, 1, 2) \stackrel{?}{=} t(6, 4, 2)$

$$3 = 6t \rightarrow t = \frac{1}{2}$$

$$1 = 4t \rightarrow t = \frac{1}{4}$$

$$2 = 2t \rightarrow t = 1$$

Not  
equal

1b.  $(-3, 1, 1)$   
 $(9, -3, -21)$

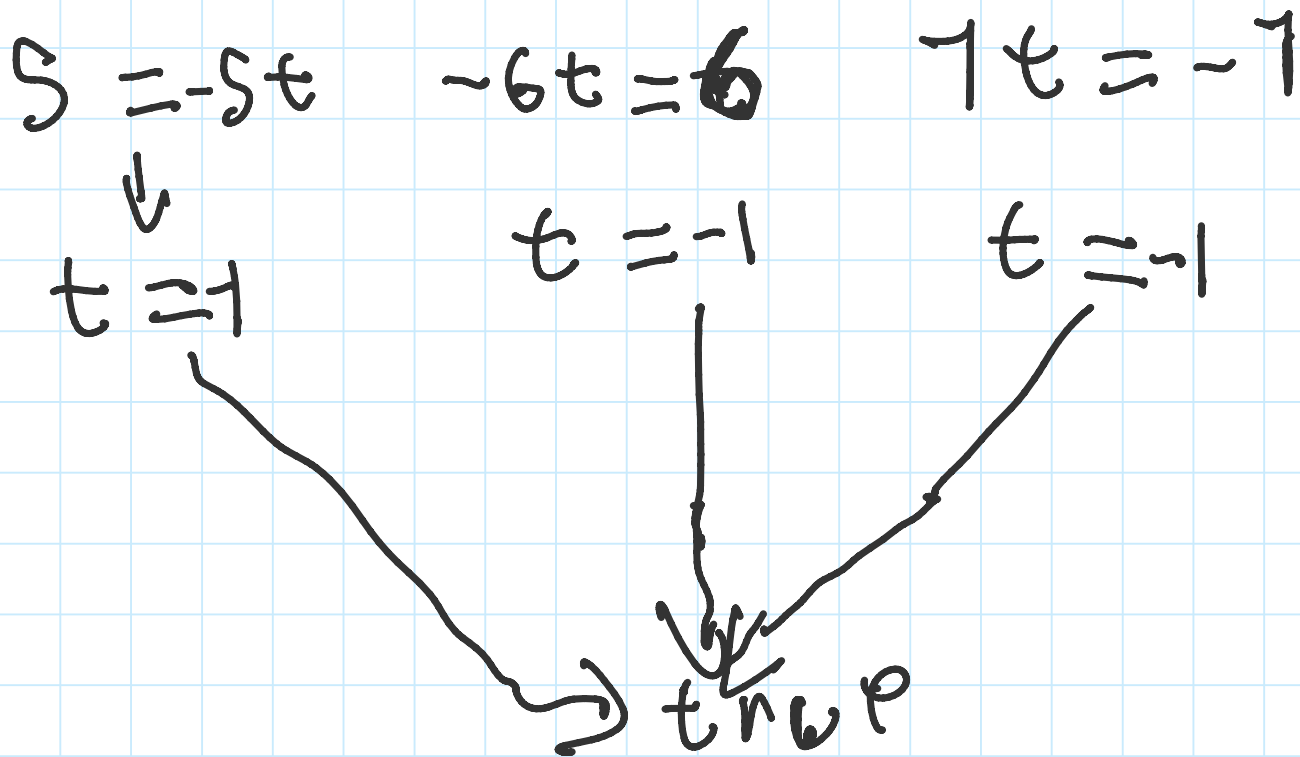
$$-3 = 9t \Rightarrow t = -\frac{1}{3}$$

$$1 = -3t \Rightarrow t = -\frac{1}{3} \text{ equal}$$

$$1 = -21t \Rightarrow t = -\frac{1}{21}$$

1c.

$$(5, -6, 1), (-5, 6, -1)$$



d

$$(2, 0, -5) \neq (5, 0, -2)$$

not equal

2a

$$(-5, -7, 1) - (3, -2, 4) = (-8, -5, -3)$$

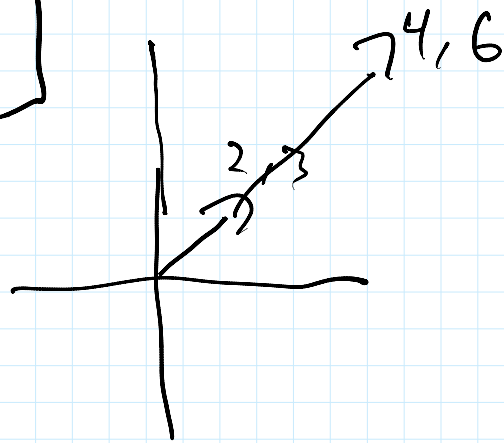
$$(-5, -7, 1) + (-3, -5, -3)$$

$$\left\{ \begin{bmatrix} 2 \\ 3 \end{bmatrix}, \begin{bmatrix} 4 \\ 6 \end{bmatrix} \right\}$$

$$c_1 \begin{bmatrix} 2 \\ 3 \end{bmatrix} + c_2 \begin{bmatrix} 2 \\ 3 \end{bmatrix} \quad \text{sets are dependant}$$

$$c_1 + 2c_2 \begin{bmatrix} 2 \\ 3 \end{bmatrix}$$

$$c_3 \begin{bmatrix} 2 \\ 3 \end{bmatrix}$$



$$c_3 \begin{bmatrix} 2 \\ 3 \end{bmatrix}$$

- Co-linear



still linear

2 dimensions



linearly  
independent

$$\begin{bmatrix} 2 \\ 3 \end{bmatrix}$$

$v_1$

$$\begin{bmatrix} 1 \\ 2 \end{bmatrix}$$

$v_2$

$$\begin{bmatrix} 9 \\ 5 \end{bmatrix}$$

$v_3$

