

1/6/20

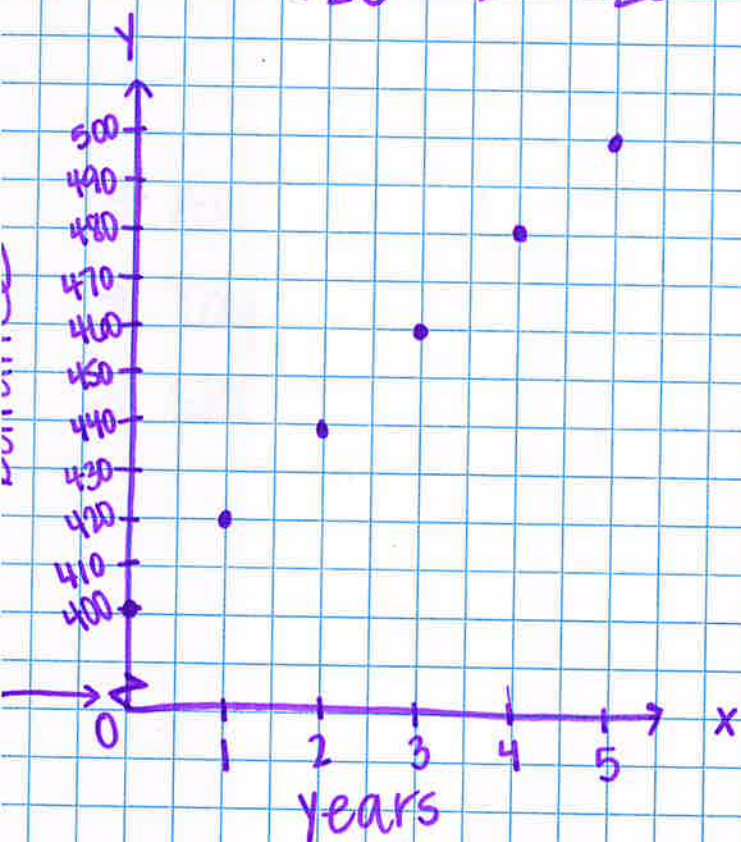
# LESSON 4.2.1

to determine if a relationship is proportional  
using a table or equivalent ratios and  
justify my reasoning.

## Gustavo's college fund

initial deposit (years)	2	3	4	5
bank balance (dollars)	440	460	480	500
	+20	+20	+20	

unit rate:  $\frac{20 \text{ dollars}}{1 \text{ year}}$



★ increases by 20 each year  
↳ same amount  
↳ straight line

★ starts at 400

## Linear relationship non-proportional

- ★ increases/decreases by the same amount
- ★ starts at a # other than 0 (0, 400)
- ★ you cannot multiply x and y to get another value  
 $(2, 440) \times 2 \neq (4, 480)$



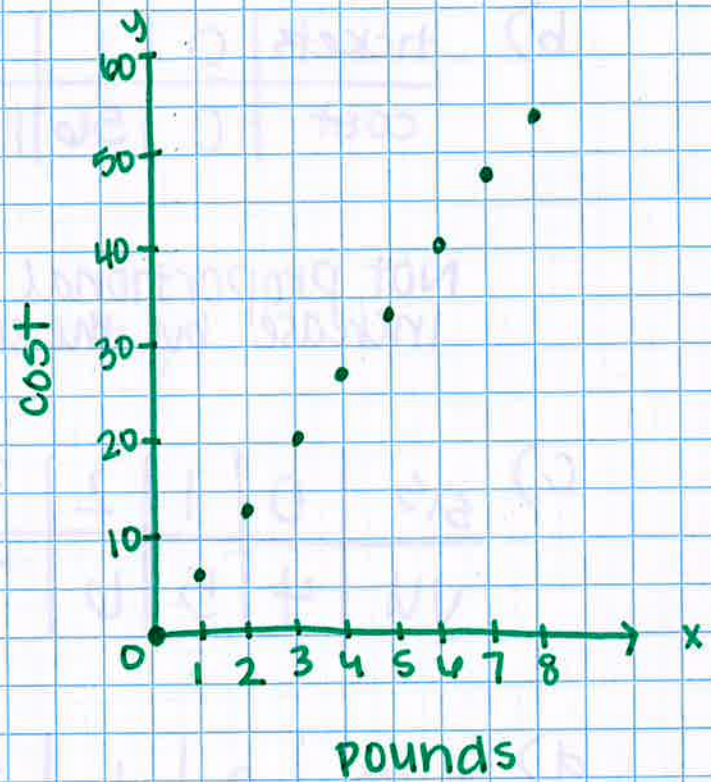
# sonja's birdseed

pounds	0	1	2	3	4	5	6	7	8
cost	0	6.75	13.50	20.25	27	33.75	40.50	47.25	54

$\begin{matrix} \uparrow & \uparrow & \uparrow \\ +1 & +1 & +1 \\ \downarrow & \downarrow & \downarrow \\ +6.75 & +6.75 & +6.75 \end{matrix}$

unit rate:  $\frac{\$6.75}{1 \text{ pound}}$

- ★ straight line
- ★ starts at zero



## Proportional relationship

- ★ increases / decrease by the same amount
- ★ starts at zero (0, 0)
- ★ both x and y values can be multiplied to get another value  
 $(4, 27) \times 2 = (8, 54)$