

Proportional

If one is doubled, then the other will double.

Kaci loves cheese and buys it whenever she can. Recently, she bought 5 pounds of mozzarella cheese for \$15.00 and 3 pounds of havarti for \$7.50.

Record both purchases in the data tables.

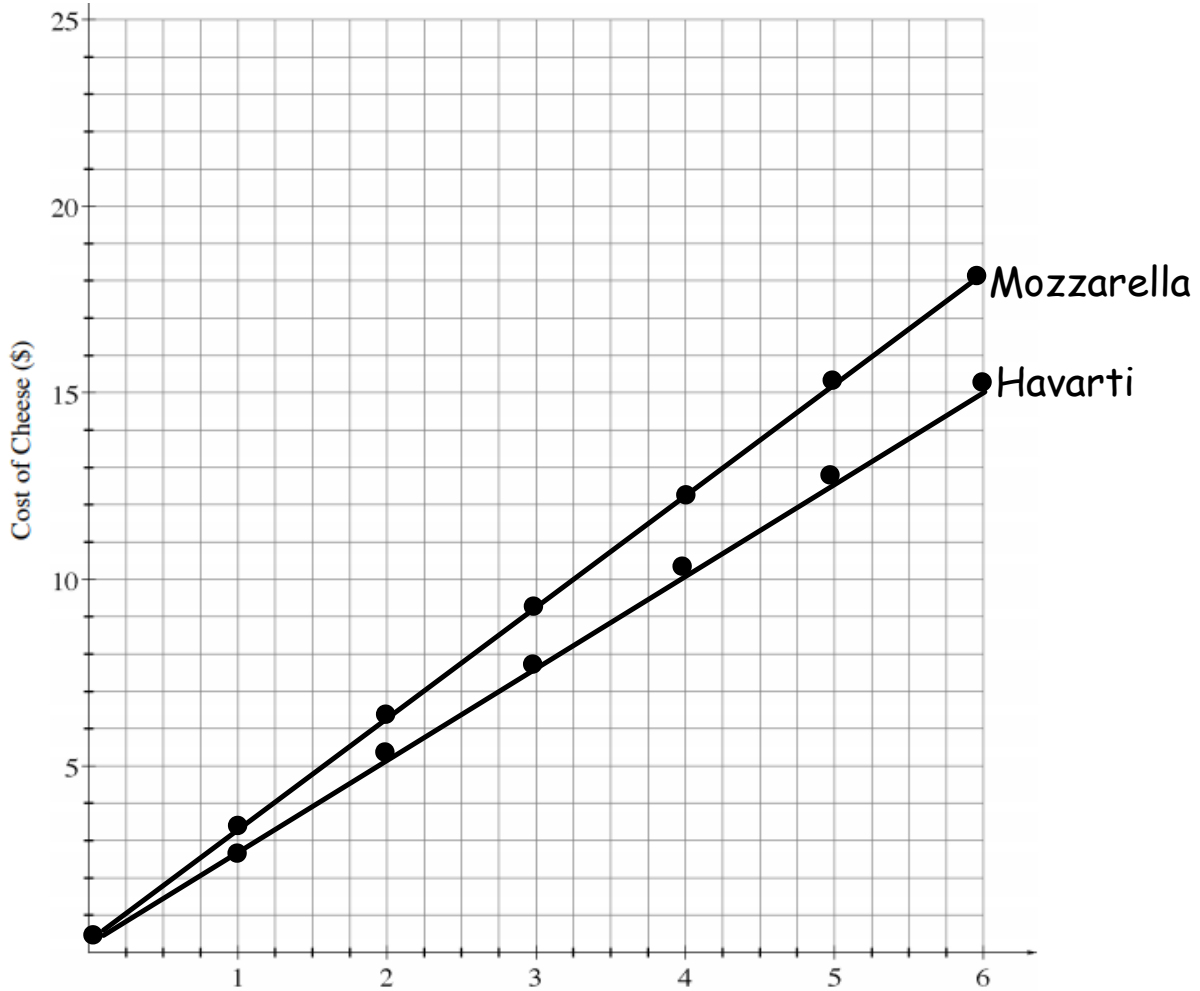
Mozzarella	
Weight (pounds)	Cost (\$)
5	15
6	18
7	21
8	24
9	27
10	30

Havarti	
Weight (pounds)	Cost (\$)
3	7.50
2	5
1	2.50
4	10
5	12.50
6	15
0	0



Plot the points on your graph. Which points should be connected?

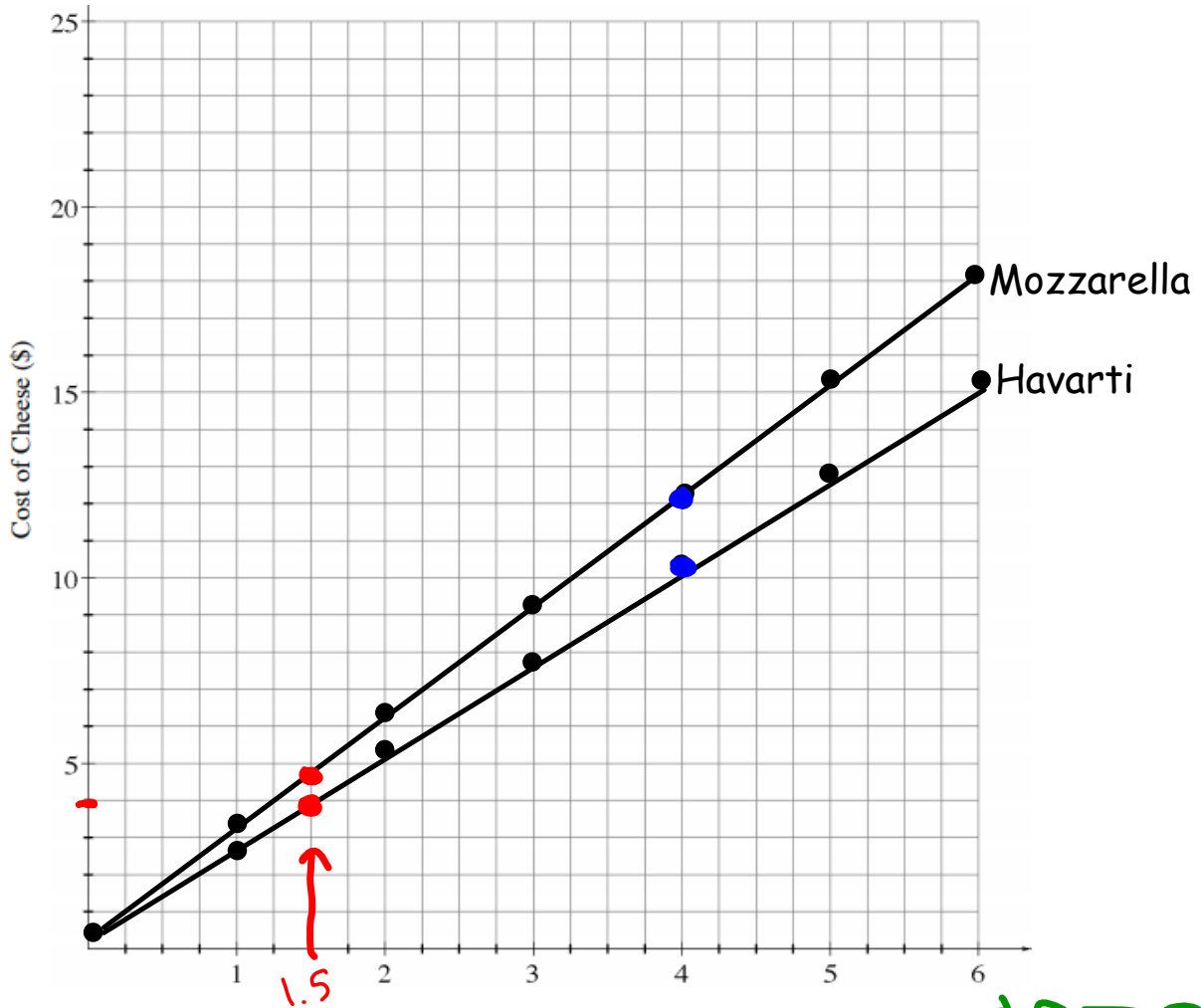
Label each line with the type of cheese.



What is the unit rate for Mozzarella? = $\frac{\$3}{1 \text{ lb}}$

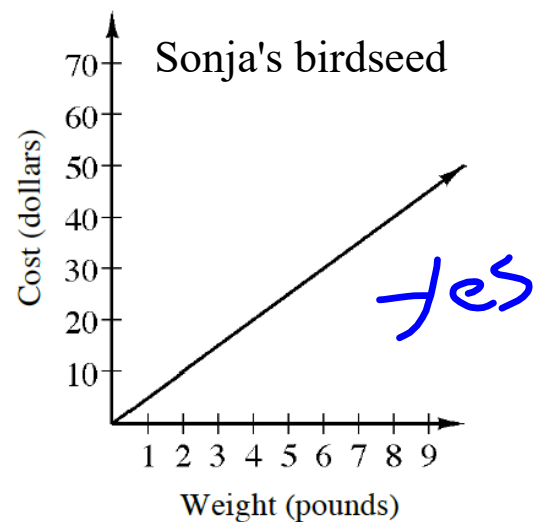
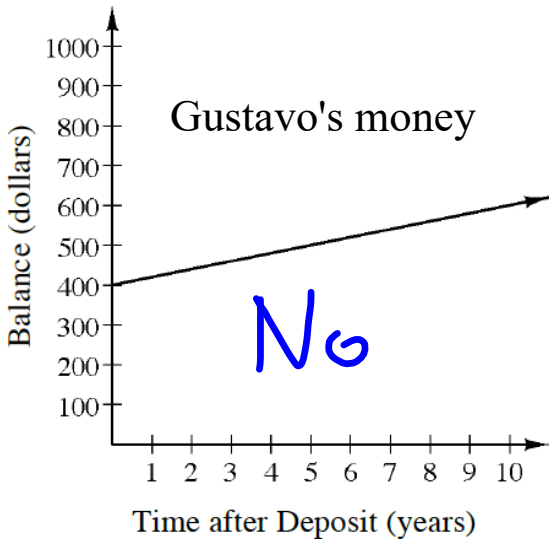
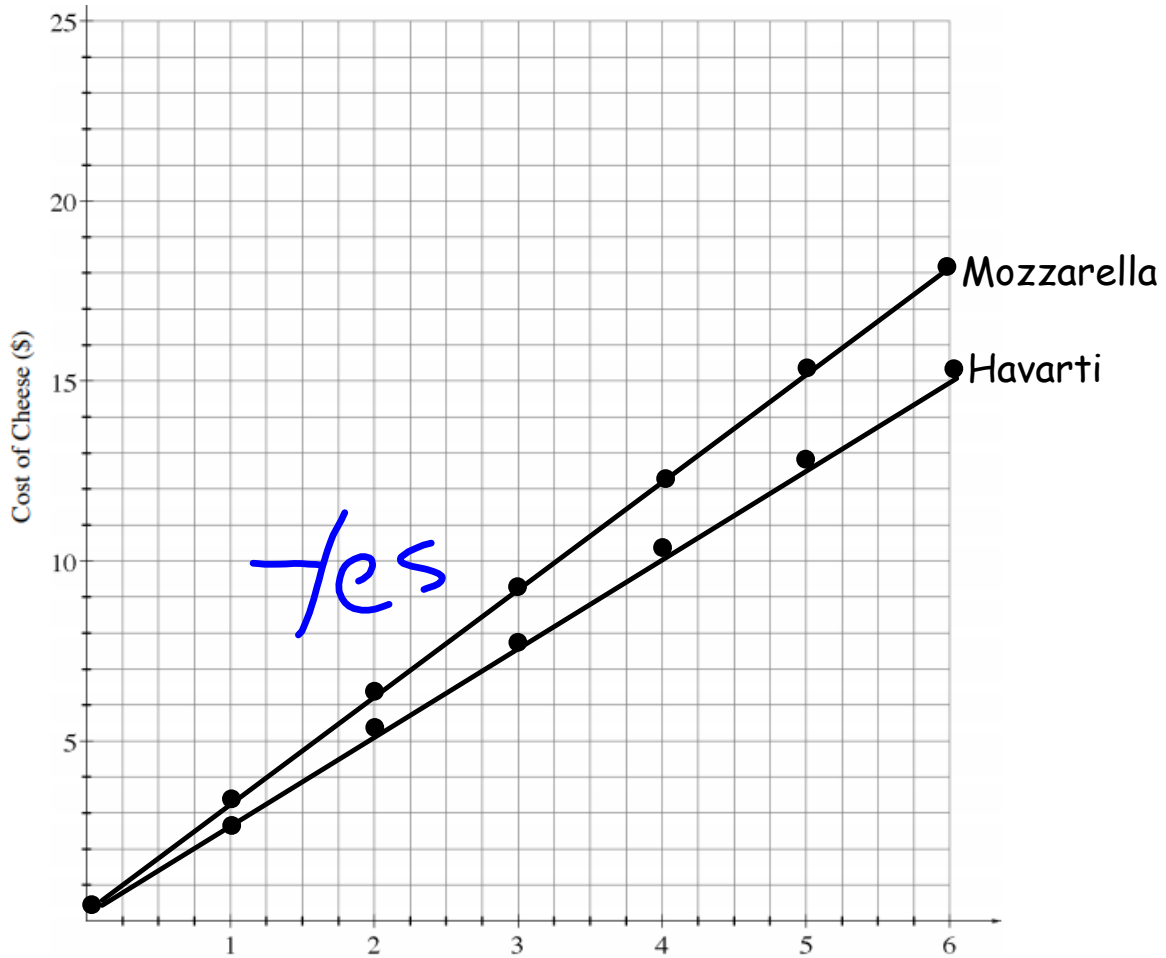
What is the unit rate for Havarti?
\$2.50

Label each line with the type of cheese.



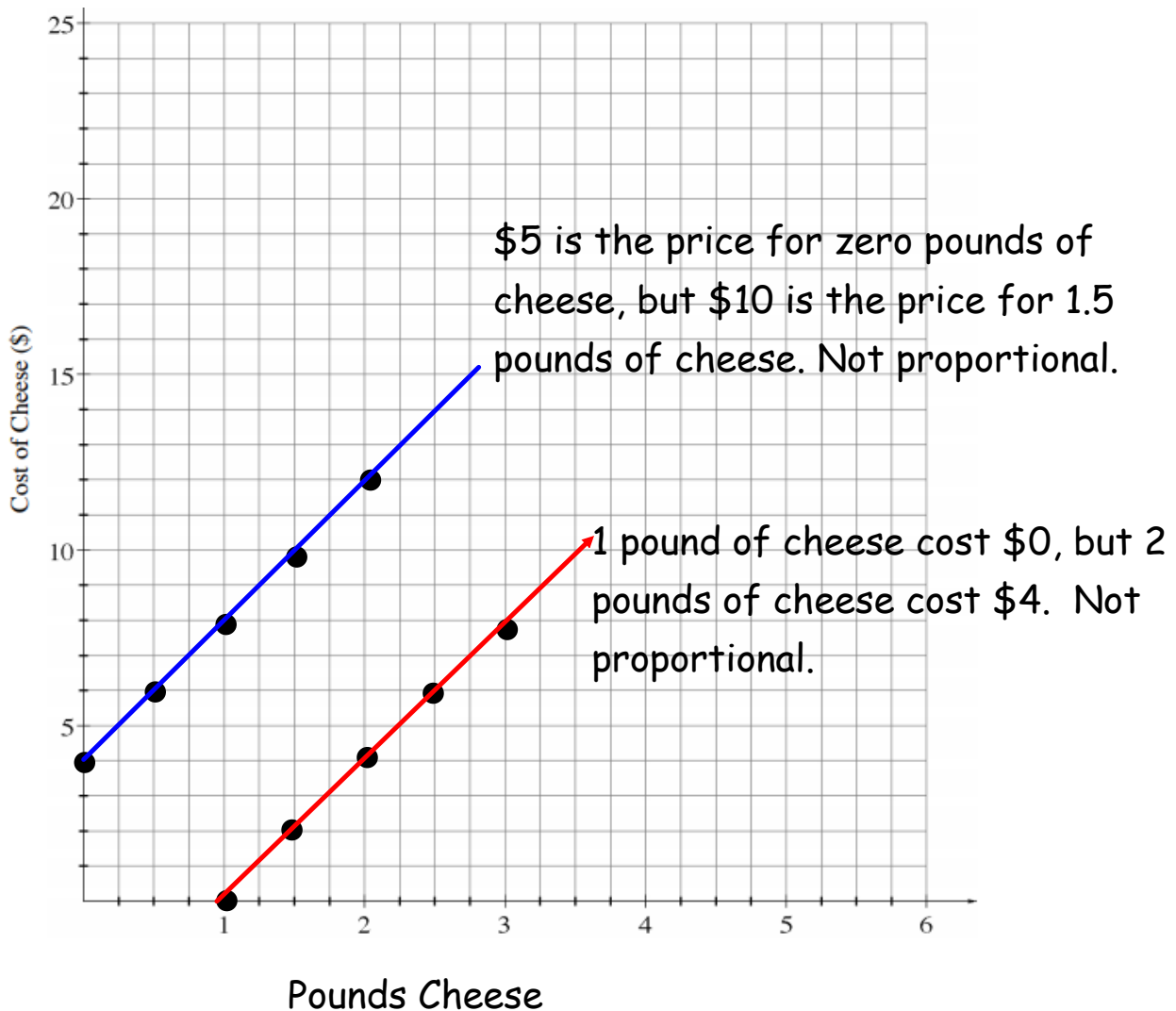
- ① How much does 1.5 pounds of havarti cheese cost? $\$3.75$
- ② How much do 1.5 pounds of mozzarella cheese cost? $\$4.50$
- ③ How much mozzarella cheese can Kaci buy for \$12? 4 lbs
- ④ How much havarti cheese can Kaci buy for \$10? 4 lbs

Which graphs show a proportion?



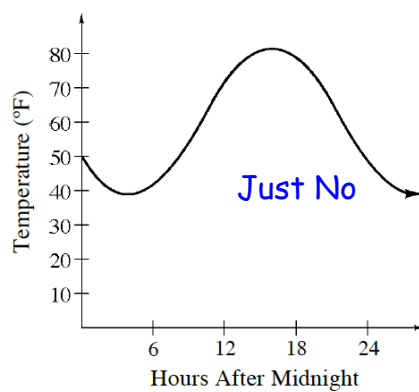
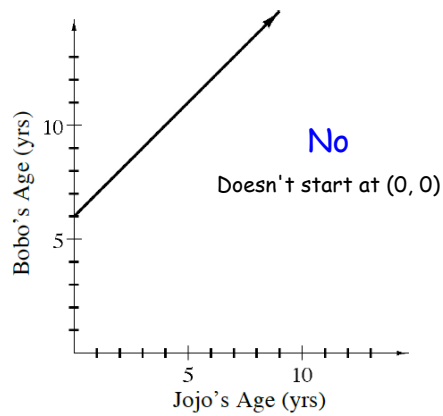
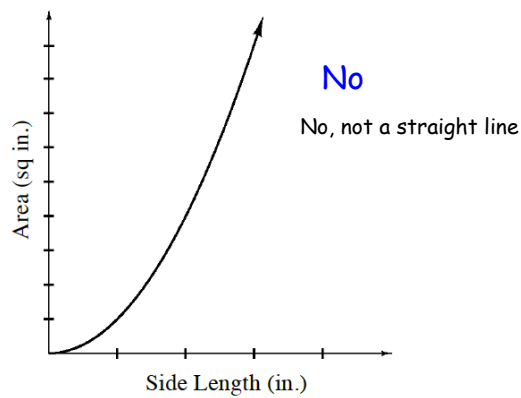
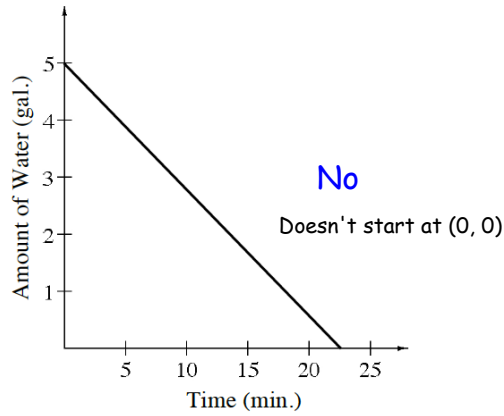
What do the proportion graphs have in common? *Straight line through (0,0)*

Could we draw a proportional graph that doesn't go through $(0, 0)$?



Proportion Graph
Straight line and starts
at $(0, 0)$

Which graphs are proportional?



Which tables are proportional?

Table 1

yes

x	y
1	2
2	4
3	6
4	8

Handwritten annotations: Blue arrows labeled $\times 2$ show the relationship between (1,2) and (2,4), and (2,4) and (4,8). Green arrows labeled $+2$ show the relationship between (1,2) and (3,6), and (2,4) and (4,8).

Table 2

No

x	y
1	2
2	3
3	4
4	5

Handwritten annotations: Red arrows labeled $\times 2$ show the relationship between (1,2) and (2,3), and (2,3) and (4,5). A red arrow labeled NOT $\times 2$ points to the transition from (3,4) to (4,5).

Table 3

Input	Output
2	20
4	40
3	30
2	40

Handwritten annotations: Red arrows labeled $\times 2$ show the relationship between (2,20) and (4,40), and (3,30) and (6,60) (implied). A red arrow labeled $\times 1$ points to the transition from (3,30) to (2,40). The value 2 in the Input column is circled in green.

No

